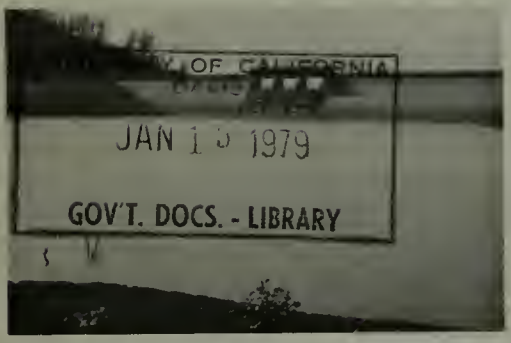


State of California
The Resources Agency

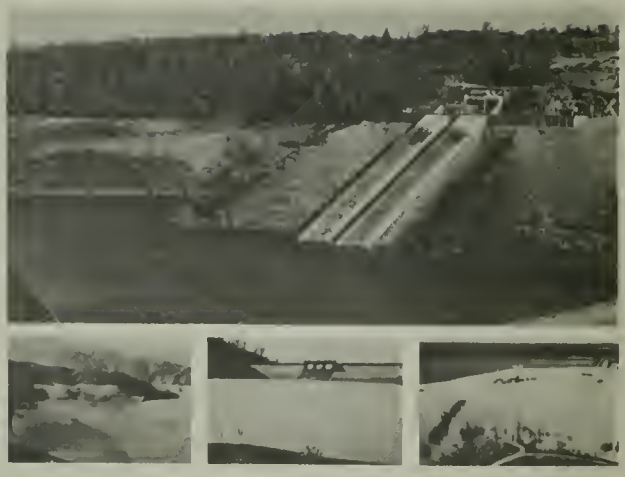
Department of
Water Resources

save water
DWR

Water Conditions and Flood Events in California

Water Year 1976-77

Bulletin 202-77
September 1978



COVER PHOTOGRAPHS: (Top) Lake Oroville (2-23-77); (lower left) Lake Shasta (9-22-76); (lower middle) Stony Gorge Reservoir (10-22-76); (lower right) San Joaquin River (1-27-69). The three reservoir photographs typify statewide storage during the 1976-1977 water year. The lower right photo is view of an orchard in the floodway, looking northeast across the San Joaquin River. The left bank levee, in Reclamation District No. 2095, is located at the bottom of the same photograph.

Department of
Water Resources

Bulletin 202-77

Water Conditions and Flood Events in California

Water Year 1976-77

September 1978

driest year in 130 years of record

Huey D. Johnson
Secretary for Resources

The Resources
Agency

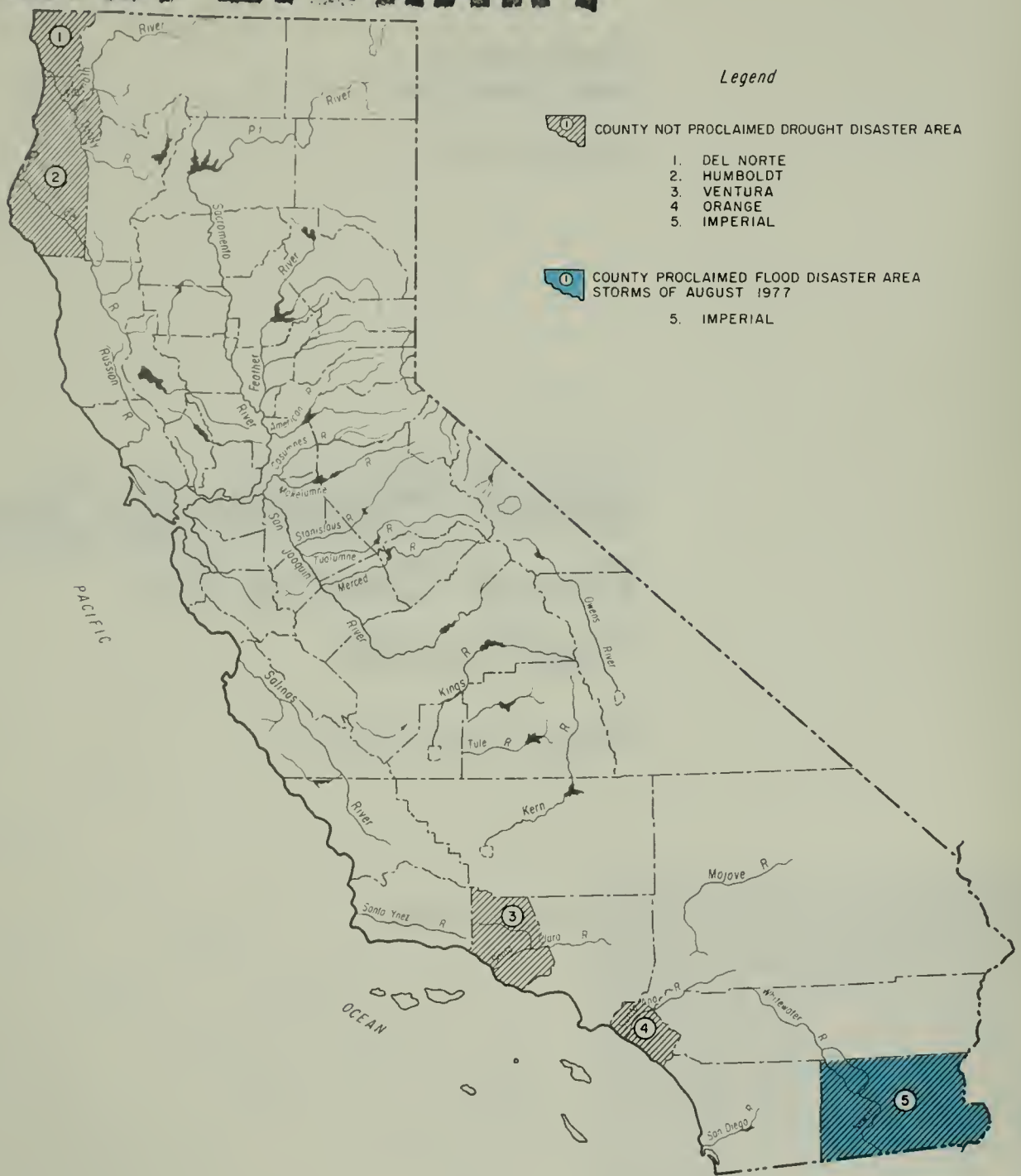
Edmund G. Brown Jr.
Governor

State of
California

Ronald B. Robie
Director

Department of
Water Resources

FIGURE 1. COUNTIES PROCLAIMED DISASTER AREAS DURING WATER YEAR 1976-77



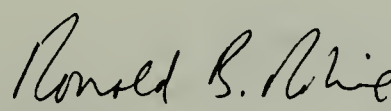
FOREWORD

Water year 1976-77 (October 1, 1976 to September 30, 1977) was the driest year of 130 years of record in California. It also was the second consecutive year of the worst two-year drought in California's history. A high pressure ridge, entrenched off the coast of California during the 1975-76 water year, became even more pronounced during 1976-77, dominating the weather patterns of the West Coast and preventing all but a few storms to penetrate into California. This water year also marked the second year of challenge to the Department of Water Resources and to all other water management agencies, to make the best use of a very limited water supply. In spite of the extreme dryness, the vagaries of the weather nevertheless brought flooding to our state in the midst of drought. This is a dramatic example of the force of natural systems.

Bulletin 202-77 is the second of an annual series combining information on general statewide water conditions and significant high water events of the year. The Bulletin includes descriptions of weather patterns preceding and during significant storm periods; information on precipitation, snowpack, unimpaired runoff, and reservoir storage; and hydrographs of stream stages and reservoir operations, weir overflow graphs, and tabulations of peak streamflow and stages.

This report was prepared from information provided by the Department of Water Resources, National Weather Service, U. S. Geological Survey, U. S. Army Corps of Engineers, U. S. Bureau of Reclamation, and many other agencies, public and private, to whom we wish to express our thanks.

The California drought for water year 1976-77 is also described in great detail in the Department's special reports. A list of these reports is on page iv.



Ronald B. Robie, Director
Department of Water Resources
The Resources Agency
State of California

Department reports on the 1976-77 drought include:

1. Special Report on Dry Year Impacts in California. February 1, 1976.
2. The California Drought - 1976. May 1976.
3. The California Drought: An Update. February 15, 1977.
4. The Continuing California Drought. August 1977.
5. The 1976-1977 California Drought - A Review. May 1978.

Copies of this bulletin are available without charge from:

State of California
DEPARTMENT OF WATER RESOURCES
P. O. Box 388
Sacramento, California 95802

CONTENTS

APPENDIXES

CONTENTS (Continued)

Page

FIGURES

TABLES

State of California
EDMUND G. BROWN JR., Governor

The Resources Agency
HUEY D. JOHNSON, Secretary for Resources

DEPARTMENT OF WATER RESOURCES
RONALD B. ROBIE, Director

ROBIN R. REYNOLDS
Deputy Director

GERALD H. MERAL
Deputy Director

ROBERT W. JAMES
Deputy Director

CHARLES R. SHOEMAKER
Assistant Director

DIVISION OF FLOOD MANAGEMENT

C. A. McCULLOUGH . . . . . Chief

This Bulletin was prepared under the direction

of

ALVIN J. BROWN . . . . . Chief, Snow Surveys Branch
DONALD H. NEUDECK. . . . . Chief, Flood Operations Branch

by

WILLIAM ARVOLA . . . . . .Senior Meteorologist, Water Resources
CHARLES H. HOWARD. . . . . .Associate Engineer, Water Resources
JOHN S. BARTOK . . . . . .Water Resources Technician II
HOWARD J. SULLIVAN . . . . .Water Resources Engineering Associate
WILLIAM D. HARRISON. . . . .Water Resources Engineering Associate

Assisted by

William G. T. Fong . . . . . Water Resources Technician I
William B. Chan. . . . . .Assistant Engineer, Water Resources
George W. Patrick. . . . . .Data Programmer II, Water Resources
Jess C. Bringham . . . . . .Data Programmer II, Water Resources
Deon Lightfoot . . . . . .Senior Stenographer

Drafting under the direction of

KEN YOSHIKAWA. . . . . Senior Delineator, Water Resources

CONVERSION FACTORS

English to Metric System of Measurement

Quantity	English unit	Multiply by	To get metric equivalent
Length	inches (in)	25.4	millimetres (mm)
		.0254	metres (m)
	feet (ft)	.3048	metres (m)
	miles (mi)	1.6093	kilometres (km)
Area	square inches (in^2)	6.4516×10^{-4}	square metres (m^2)
	square feet (ft^2)	.092903	square metres (m^2)
	acres	4046.9	square metres (m^2)
		.40469	hectares (ha)
		.40469	square hectometres (hm^2)
		.0040469	square kilometres (km^2)
	square miles (mi^2)	2.590	square kilometres (km^2)
Volume	gallons (gal)	3.7854	litres (l)
		.0037854	cubic metres (m^3)
	million gallons (10^6 gal)	3785.4	cubic metres (m^3)
	cubic feet (ft^3)	.028317	cubic metres (m^3)
	cubic yards (yd^3)	.76455	cubic metres (m^3)
	acre-feet (ac-ft)	1233.5	cubic metres (m^3)
		.0012335	cubic hectometres (hm^3)
		1.233×10^{-6}	cubic kilometres (km^3)
Volume/Time (Flow)	cubic feet per second (ft^3/s)	28.317	litres per second (l/s)
		.028317	cubic metres per second (m^3/s)
	gallons per minute (gal/min)	.06309	litres per second (l/s)
		6.309×10^{-5}	cubic metres per second (m^3/s)
	million gallons per day (mgd)	.043813	cubic metres per second (m^3/s)
Mass	pounds (lb)	.45359	kilograms (kg)
	tons (short, 2,000 lb)	.90718	tonne (t)
		907.18	kilograms (kg)
Power	horsepower (hp)	0.7460	kilowatts (kW)
Pressure	pounds per square inch (psi)	6894.8	pascal (Pa)
Temperature	Degrees Fahrenheit (°F)	$\frac{t F - 32}{1.8} = t C$	Degrees Celsius (°C)

FIGURE 2. HYDROLOGIC BASINS OF CALIFORNIA

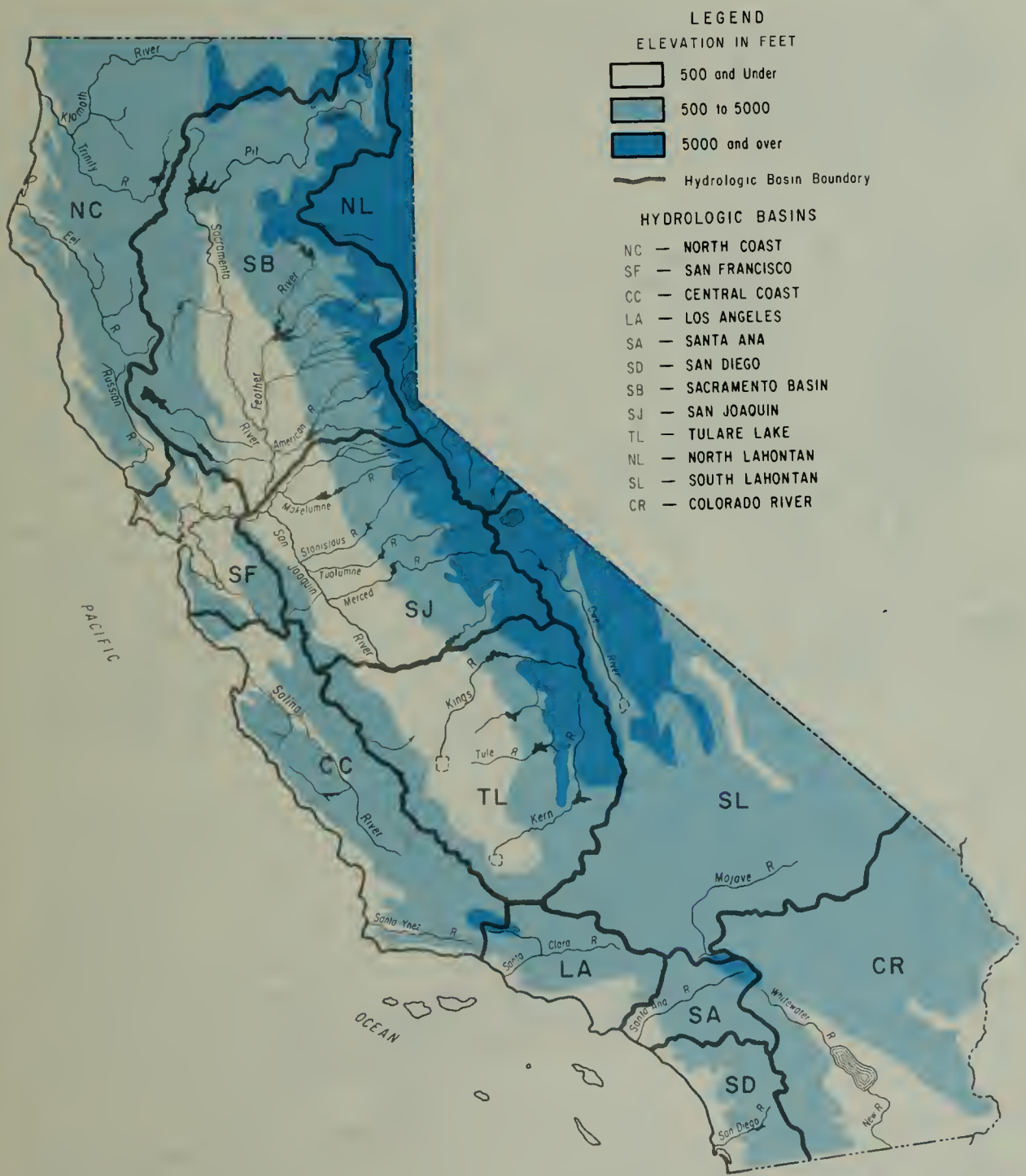


FIGURE 3. WATER YEAR PRECIPITATION IN INCHES (MILLIMETRES)
OCTOBER 1, 1976 - SEPTEMBER 30, 1977

CHAPTER I - WEATHER

During Water Year 1976-77, the characteristic feature of the weather pattern was one of high atmospheric pressure along the West Coast with a marked northward shift of the Pacific storm track into northerly latitudes. The pattern of the water year was largely similar to the pattern of the 1975-76 water year, except that the high pressure was even more pronounced, with even Oregon and Washington suffering from a deficit of precipitation.

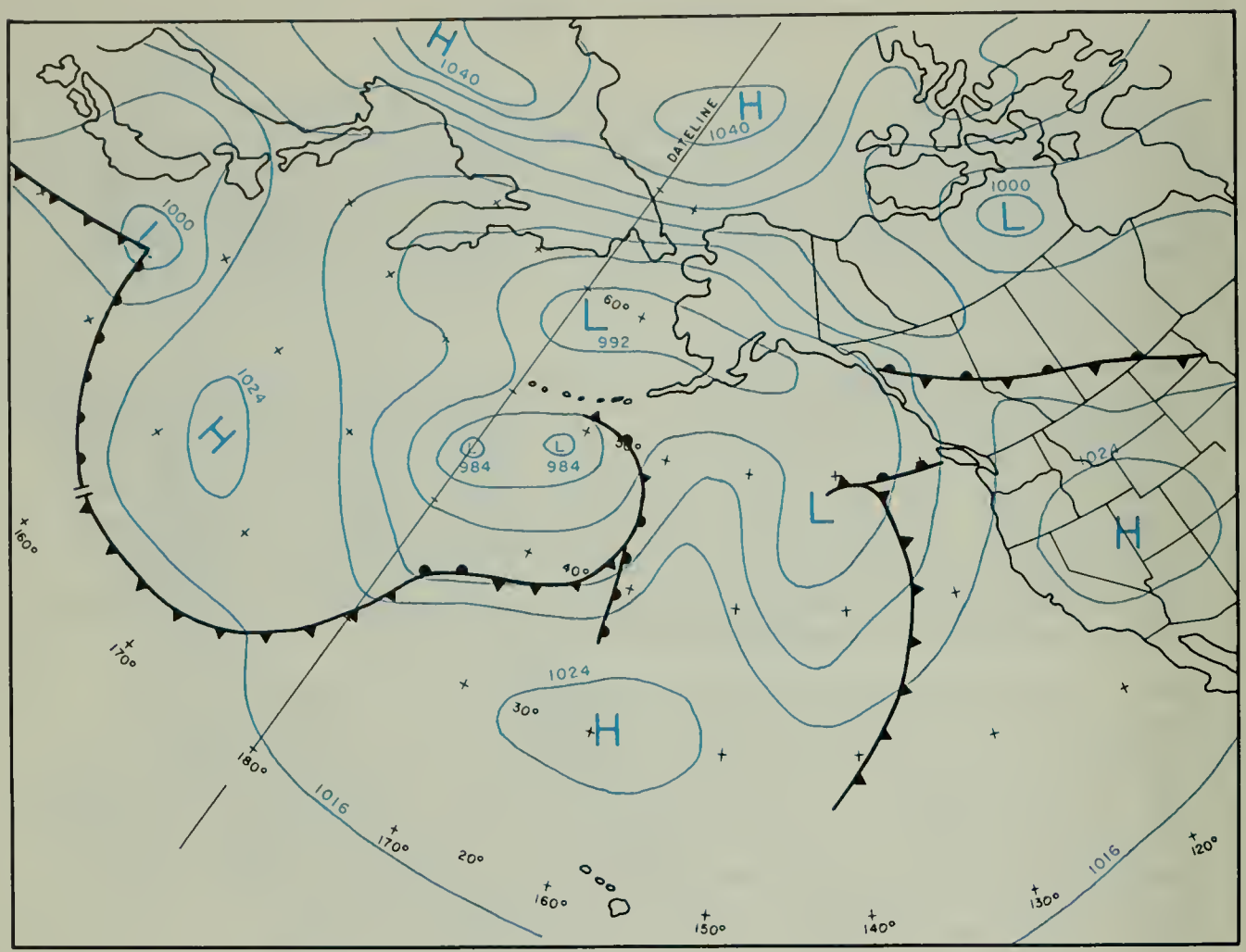
The storm track was displaced to latitudes north of 50°N, and Alaska experienced storm systems with above-normal temperatures and above-normal precipitation. The winter was so warm in Alaska that Cook Inlet had very little ice, for the first time in the memory of old timers. In the Bering Sea, the edge of the polar pack ice was further north than normal. A typical weather map depicting the winter pattern in 1976-77 is shown in Figure 4. The surface weather map is for Christmas Day, 1976 (0400 PST), and shows the high and low (atmospheric) pressure systems and the fronts separating dissimilar air masses.

Many individuals have raised the question as to why the high pressure was so persistent over the West for so many months. Certainly not all the answers are known at this time, but there are factors which contributed to the nearly stationary pattern. Dr. Jerome Namias at Scripps Institution of Oceanography, a prominent meteorologist who has studied global weather patterns for many years, has pointed out a number of physical events contributing to the odd pattern in 1976-77. Some of the events which took place are discussed in the fcllowing paragraphs.

During Fall 1976 a ridge of high pressure in the atmosphere was situated near the West Coast. This was the beginning of a chain of events that affected the winter pattern. Anomalous (i.e., departing from normal) south winds over the eastern Pacific (California coast to 140°W longitude) began a transport of warm ocean water northward. The south winds, being warm, extracted comparatively little heat from the ocean. Over the eastern Pacific, the sea-surface temperatures rose several degrees Celsius above normal during October and November. The addition of this heat to the overlying atmosphere helped to strenghten the south winds in the atmosphere, which in turn intensified the ridge of high pressure.

In addition to the warmer-than-normal water in the eastern Pacific, there existed abnormally cold water (2 to 4°C) in the central Pacific (west of 140°W). The contrast between the cold and warm waters spread into the overlying atmosphere and stimulated a storm track along the zone of strong contrast in sea surface temperatures into Alaska, and also strengthened the south winds which kept the storm track in its far northerly position.

FIGURE 4. SURFACE WEATHER MAP FOR DECEMBER 25, 1976



ISOBARS, OR LINES OF EQUAL ATMOSPHERIC PRESSURE

OCCLUDED FRONT (Cold Front Overtakes and Lifts Warm Front)

COLD FRONT (Cold Air Reploces Worm Air)

WARM FRONT (Warm Air Reploces Cold Air)

STATIONARY FRONT (Sloping Frontal Surface Moves Very Little or Remains in Same Ploce)

During the winter months (December, January, February), upper level weather maps (the free air wind pattern) usually showed a slight ridge of high pressure (i.e., a northward bulge of the windflow streamlines) over the West. This is a climatological normal state which is related to the influence of the earth's mountain ranges and heat source and sink areas.* The ridge amplification which took place in Fall 1976 was, therefore, operating on a favored location of a ridge of high pressure on the normal charts. This was a big factor in keeping this unusual weather pattern stationary.

Because the upper level winds in the atmosphere blow in a meandering pattern (such as the currents in a river channel), a ridge of high pressure at one location creates a trough of low pressure downstream. Thus, in the Winter 1976-77, a deeper-than-normal trough of low pressure was established over the eastern United States, and this pattern set in motion the transport of very frigid arctic air into the East. Precipitation in the East fell as snow and a widespread snow cover served, in turn, to further refrigerate the cold air masses coming out of Canada. This process helped to anchor the trough of low pressure at a very optimum wave length from the West Coast ridge. The East experienced a very cold winter with a heavy snowfall, while the West had the favorable ridge of high pressure and an absence of rainfall.

There were two brief periods during Winter 1976-77 when a flow pattern from the west broke into the stagnant high pressure ridge. The first was at the end of December 1976 extending into the first few days of January 1977; the second was around February 20. Although precipitation occurred in California with the breakthrough of upper level west winds, these were only temporary dislodgments of the high pressure regime, and the atmosphere soon reverted back to the drought pattern. However, the first breakthrough did result in the intensification of a frontal system as it moved into Southern California in the first seven days of January 1977. Significant precipitation fell in that area and accounted for three month winter quarter accumulations at many Southern California stations exceeding 60 percent of normal, in contrast to 20 to 30 percent of normal accumulations in the northern part of the State. (See Table 1.)

The impact of the precipitation deficit can be seen by reference to Figures 5 and 6 and Table 1. In Figure 6 are graphs of the accumulated precipitation for selected stations in different hydrologic basins of the State. The graphs begin on October 1,

---

* In meteorology, a source is an area where energy (such as heat) is added to a system either instantaneously or continuously. Conversely, a sink is an area where energy is removed.

1976 and extend to April 30, 1977; also shown for comparison are the normal accumulations. The 1976-77 curves are significantly below the normal curves. In Table 1 are the precipitation totals for 23 stations in ten hydrologic basins of California for the following time periods: October-November, the winter quarter, spring quarter, and water year (October to September). Precipitation totals are expressed in millimetres and inches, and in percent of normal. The percent of normal figures in the table bear out the dryness of the season, especially in the winter quarter, when normally the rains are the heaviest. The statewide distribution of percent-of-normal isopleths (lines of equal percent of normal) for the Water Year 1977 are shown in Figure 5.

In the spring quarter (March, April, May) the trend of the drought weather pattern of winter continued into March and April, resulting in below-normal precipitation. In May, however, stronger weather fronts began to move into the State and brought above-normal precipiation. The amounts in the Sierra Nevada for May were two to three times normal, but in Southern California they were higher--ten to twenty times normal. These late spring rains, though, did little to significantly alleviate the precipitation deficit of the previous seven months--statewide or even locally.

A significant weather event occurred late in the Water Year in the form of a hurricane in August 1977. Rated first as a tropical storm, the system formed off the coast of Mexico on August 13, 1977, and was given the name "Doreen". The storm center tracked northwestward and reached a point near the top of Baja California on August 15. By that time Doreen had intensified and was classified as a full-fledged hurricane with wind speeds in excess of 118 kilometres per hour (73 miles per hour). The counterclockwise circulation around the hurricane was beginning to spread cloud layers over Southern California. By August 16, the circulation had weakened sufficiently and the winds diminished so that Doreen was downgraded again to tropical storm category. Nevertheless, precipitation spread into California on the sixteenth and within the next three days affected a large portion of Southern California. The track of the 12-hourly positions of Doreen and the isohyets of the 3-day rainfall are shown in Figure 8. The storm path lay parallel and close to the coast of Baja California. Doreen's center entered the California coast near El Toro Marine Corps Air Station on the evening of August 17 and quickly lost its identity as the storm center filled.

Precipitation in the coastal plains amounted to 75 millimetres (near 3 inches), but the heavier areas were in the Imperial Valley with 100 millimetres (4 inches), in the San Jacinto Mountains (west of Palm Springs) with 150 millimetres (6 inches) and in eastern San Bernardino County with 150 millimetres (6 inches).

Some of the stations which reported storm totals of more than 100 millimetres included:

San Diego County

Cuyamaca
Palomar Mountain Observatory
Crawford Ranch

Imperial County

Brawley 2 SW

Riverside County

Mount San Jacinto Park
Snow Creek Upper

San Bernardino County

Mitchell Caverns
Mill Creek Intake

TABLE 1. PRECIPITATION AMOUNTS AT SELECTED STATIONS DURING WATER YEAR 1976-77

HYDROLOGIC BASIN / Station	ELEVATION feet	ELEVATION metres	PRECIPITATION FOR SELECTED PERIODS: Oct. - Nov. 1976 inches	Oct. - Nov. 1976 (millimetres)	Oct. - Nov. 1976 Percent Normal	Winter Quarter inches	Winter Quarter (millimetres)	Winter Quarter Percent Normal	Spring Quarter inches	Spring Quarter (millimetres)	Spring Quarter Percent Normal	Water Year inches	Water Year (millimetres)	Water Year Percent Normal
NORTH COAST														
Gasquet RS	384	117	4.69	119	21	13.35	339	29	16.17	411	72	45.23	1149	48
Eureka	60	18	3.26	83	38	4.66	118	25	7.63	194	76	19.17	487	49
Fort Bragg	80	24	2.80	71	36	5.05	128	25	4.95	126	52	16.56	421	43
SACRAMENTO														
Shasta Dam	1075	328	1.63	41	15	6.19	157	20	9.56	243	65	26.58	675	45
Blue Canyon	5280	1610	3.19	81	27	9.18	233	28	9.33	237	57	24.40	620	39
Sacramento CI	84	26	.62	16	21	3.08	78	30	2.45	62	56	6.71	170	37
SAN JOAQUIN														
Fresno AP	328	100	2.42	61	150	1.48	38	25	2.24	57	70	6.20	157	57
TULARE LAKE														
Grant Grove	6600	2013	1.57	40	21	5.74	146	26	5.67	144	42	14.34	364	33
Bakersfield	495	151	.42	11	46	.78	20	26	1.87	47	96	4.18	106	69
SAN FRANCISCO BAY														
Napa State Hospital	60	18	1.72	44	61	4.52	115	33	4.27	108	74	11.23	285	46
Kentfield	128	39	3.84	98	45	10.30	262	36	6.20	157	61	23.39	594	49
San Francisco CI	130	40	1.42	36	40	4.68	119	40	2.63	67	56	9.62	244	47
CENTRAL COAST														
Monterey	385	117	1.32	34	42	4.65	118	47	3.00	76	64	9.75	248	53
San Luis Obispo	315	96	1.53	39	50	4.58	116	34	5.48	139	101	11.62	295	53
Santa Barbara	5	2	1.18	30	49	5.14	131	48	4.55	116	105	11.47	291	65
SOUTH COASTAL AREA*														
Mt. Wilson 2	5709	1741	2.11	54	44	13.12	333	69	11.82	300	149	29.68	754	91
Los Angeles CC	257	78	.73	19	37	3.76	96	42	4.92	125	146	11.67	296	80
San Diego AP	13	4	1.13	29	71	3.48	88	61	2.41	61	100	9.18	233	92
NORTH LAHONTON														
Susanville AP	4146	1264	.28	7	10	2.77	70	36	1.89	48	61	7.15	182	48
SOUTH LAHONTON														
Bishop AP	4108	1253	.02	0.5	2	.99	25	31	.66	17	61	2.79	71	49
Barstow	2160	659	.53	13	77	1.06	27	65	1.15	29	146	4.36	111	110
COLORADO RIVER														
Palm Springs	425	130	.40	10	49	2.17	55	69	.10	3	11	4.99	27	90
Imperial	-64	-20	.58	15	141	.22	6	20	.04	1	13	4.72	120	184

* South Coastal Area includes the Los Angeles, Santa Ana, and San Diego Hydrologic Basins

Metric Equivalents:
1 inch = 25.4 millimetres (mm)
1 foot = 0.305 metre (m)

Winter Quarter=December, January, February
Spring Quarter=March, April, May

FIGURE 5. WATER YEAR PRECIPITATION IN PERCENT OF NORMAL
OCTOBER 1, 1976 - SEPTEMBER 30, 1977

FIGURE 6. PRECIPITATION ACCUMULATION AT SELECTED STATIONS, OCTOBER 1976 - APRIL 1977

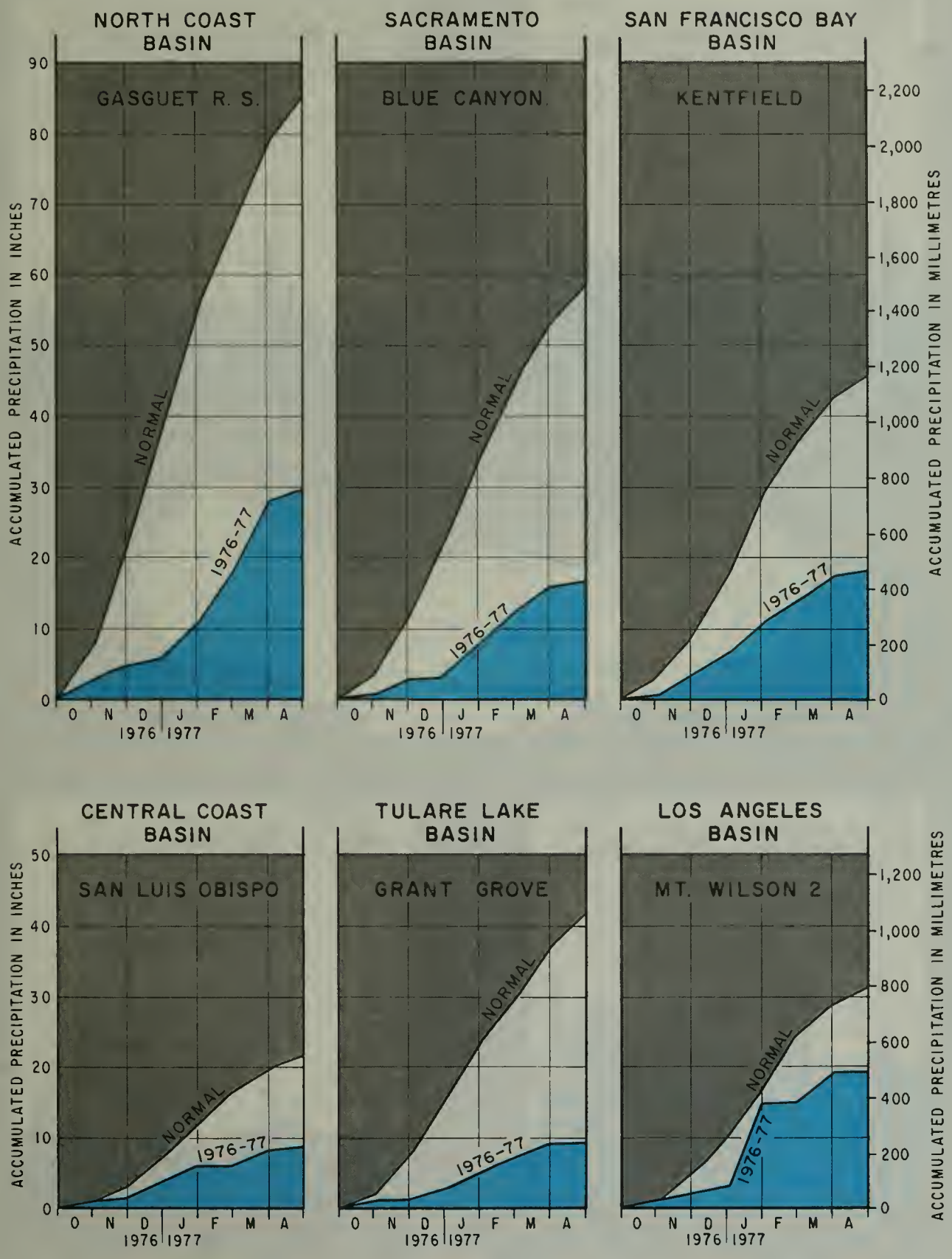
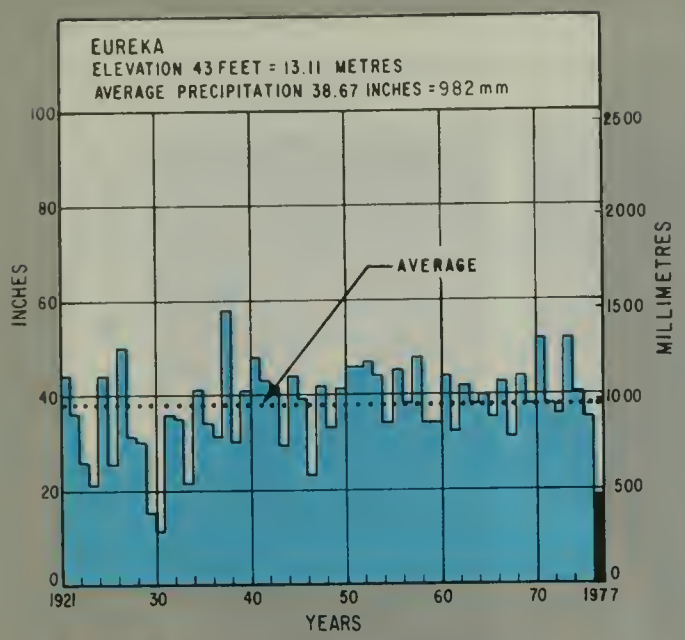
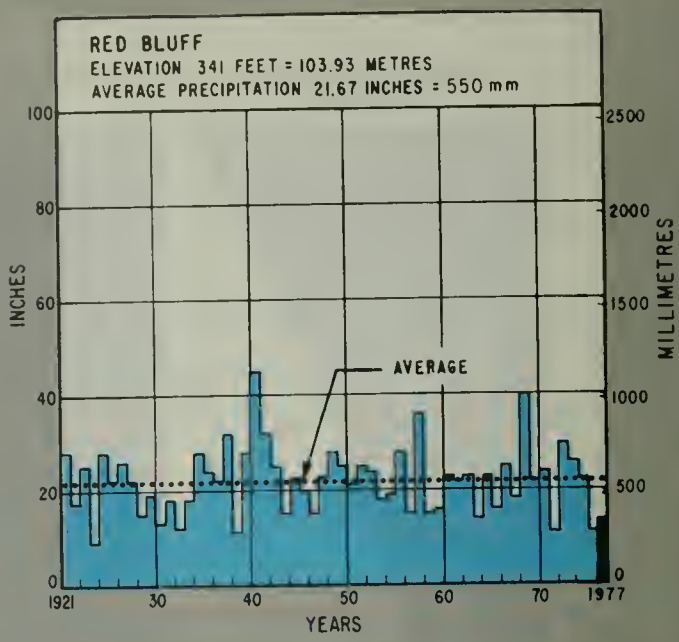
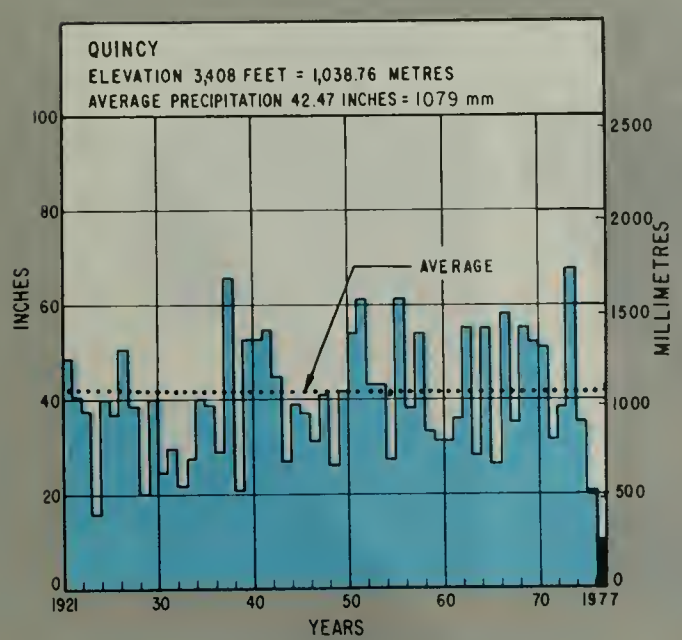
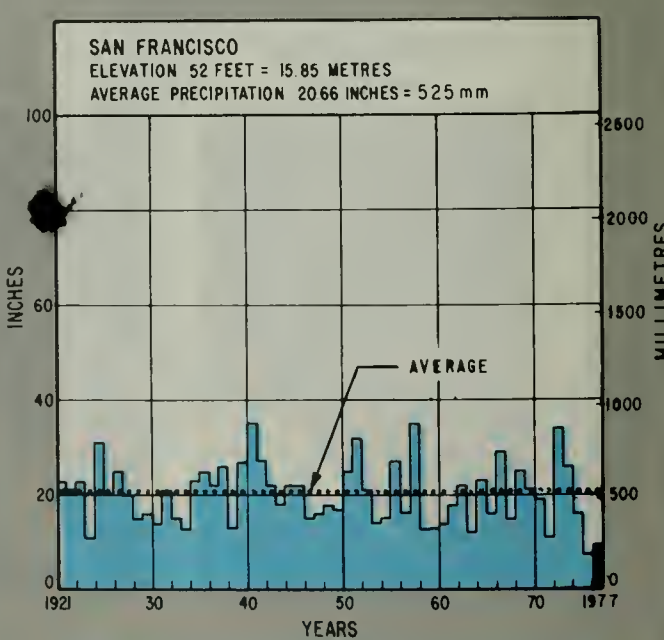


FIGURE 7. ANNUAL VARIATION IN

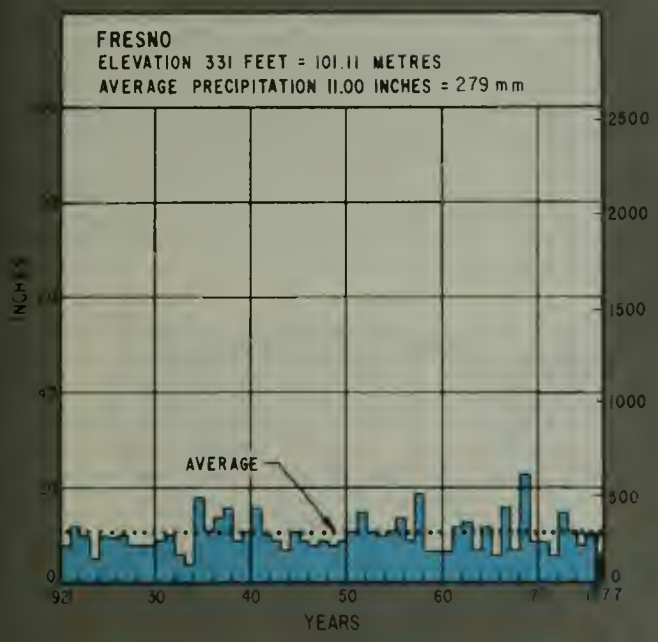


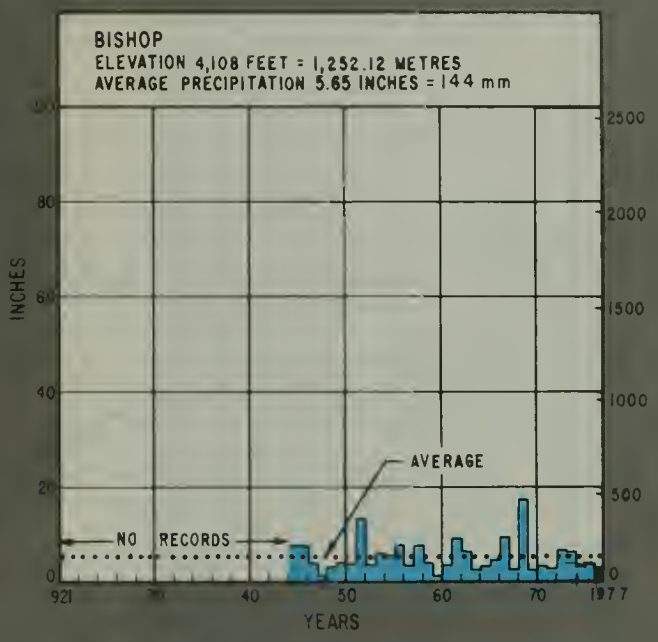


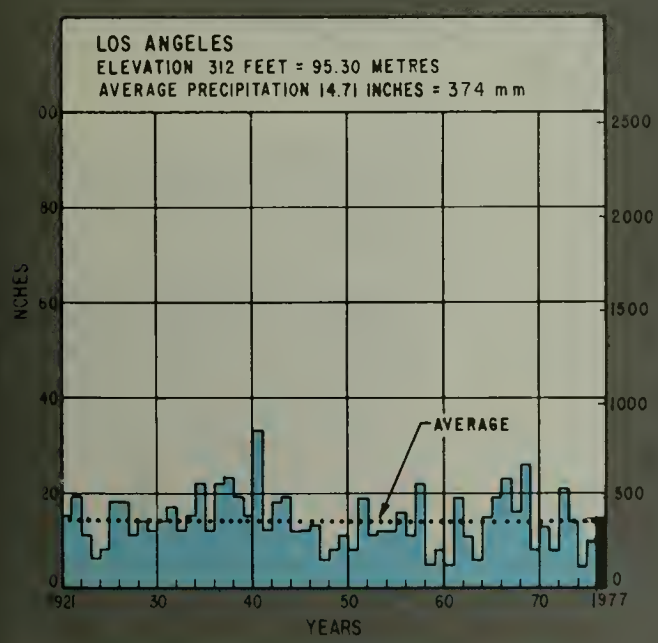




PRECIPITATION AT SELECTED CITIES







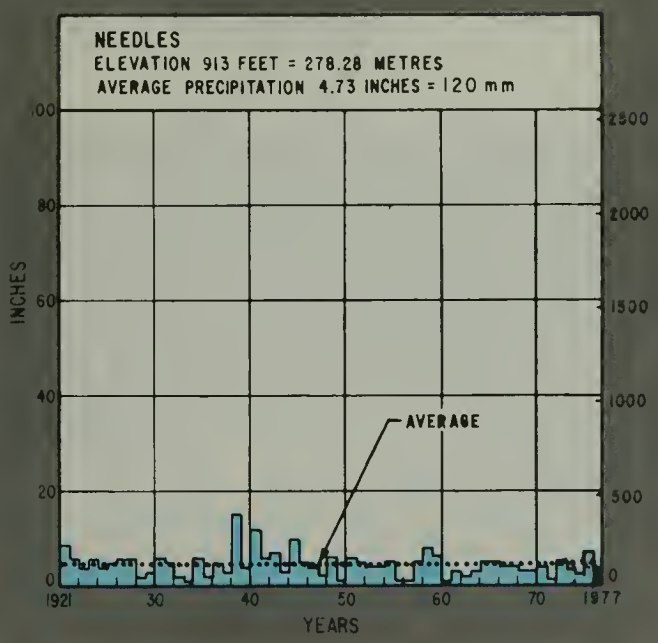


FIGURE 8. ISOHYETS OF PRECIPITATION IN MILLIMETRES
FOR HURRICANE "DOREEN" AUGUST 16-18, 1977

1 MILLIMETRE = 0.039 INCH
1 INCH = 25.4 MILLIMETRES

LEGEND
17 1600 PST
ZONE
TIME
DATE

TRACK OF HURRICANE "DOREEN"
AUGUST 1977

HOME ON HIGHWAY 111 BECOMES AN ISLAND

OFFRAMP ON FREEWAY UNDER WATER

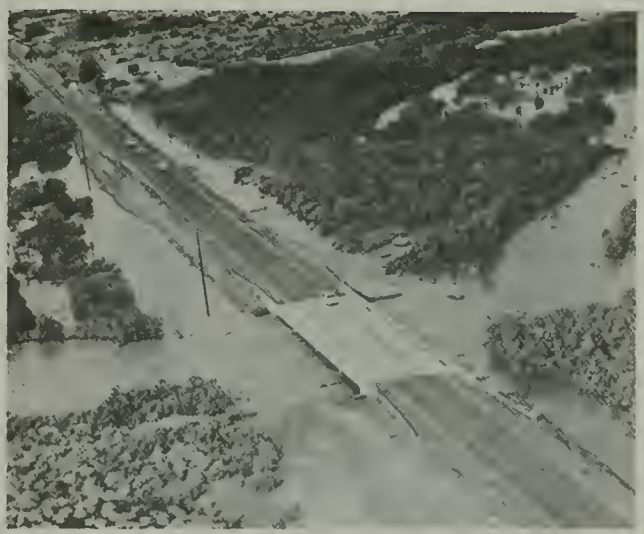
BOWKER ROAD BECOMES A LAKE

Doreen Dumps 4.2 Inches...

Havoc in Fields, Homes

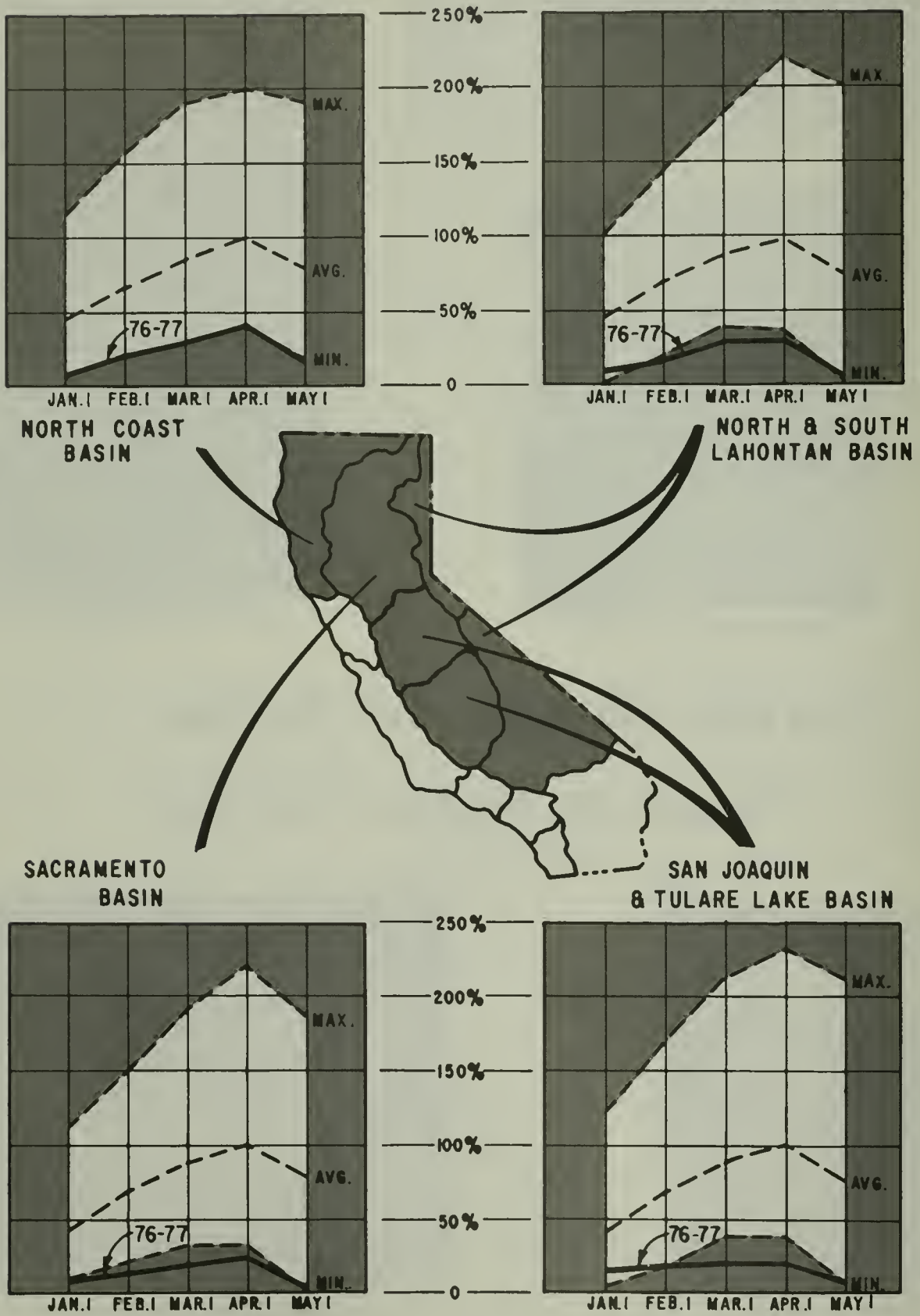
IMPERIAL COUNTY

TOO MUCH WATER FOR COTTON



ALAMO'S FLOW THREATENS 111 BRIDGE

FIGURE 9. WATER CONTENT OF SNOWPACK ACCUMULATION
IN PERCENT OF APRIL 1 AVERAGE

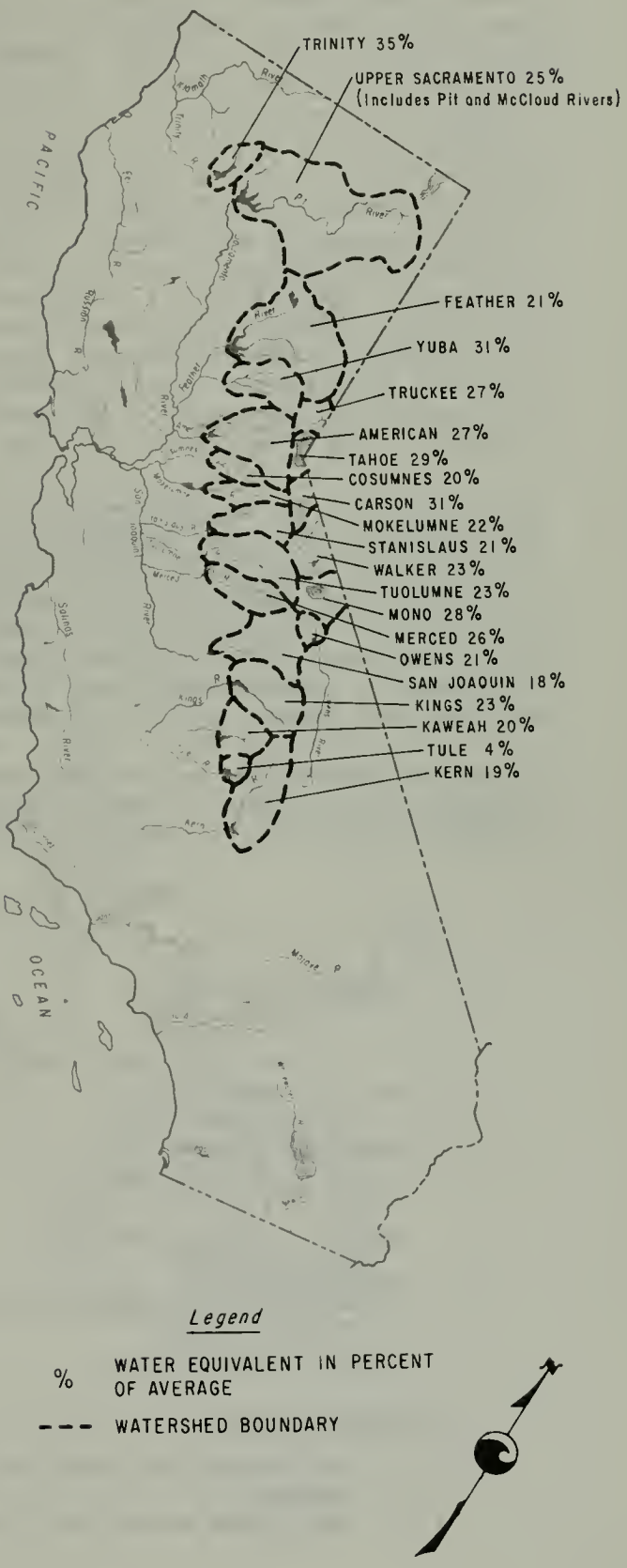


Snowpack water storage on April 1, 1977, was the lowest in 47 years in all basins except the Trinity and Feather Rivers. Snowpack was nearly depleted at elevations below 7,000 feet, and sustained snowmelt was already occurring at high elevations by April 1. The expected average increase in snowpack of from 10 percent to 15 percent in the month of March did not occur, and by April 1 the snowpack was only 25 percent of normal. A record low in snow water content was set for most watersheds in California. By April 1, it was evident that little relief from the drought was to be expected during the remaining months of the water year.

Snowmelt began in late March and was essentially completed early in May 1977. Normally on May 1 about 70 percent of the seasonal snow accumulation is still available for snowmelt runoff, but the snowpack had already decreased to about 5 percent of average. About 75 percent of the snow courses measured were bare. NASA satellite imagery indicated the effective snow line elevation on May 1 ranged from approximately 2 140 metres (7,000 feet) in the San Joaquin Basin to 2 410 metres (7,900 feet) in the Kern Basin. The combined snowcovered area of the San Joaquin, Kings, Kaweah, Tule, and Kern River Basins on May 1 was 7 100 square kilometres (2,750 square miles) compared to 6 480 km^2 (2,500 square miles) of snowcovered area the year before. A late April 1977 storm increased the snowcovered area, but the snowpack contained 15 percent less water content than the May 1976 snowpack.

April 1 snowpack, in percent of average for individual river basins, is depicted in Figure 10, and seasonal snowpack accumulation curves are shown in Figure 9.

FIGURE 10. SNOWPACK IN PERCENT OF AVERAGE APRIL 1, 1977



UNIMPAIRED RUNOFF

Unimpaired runoff during the 1976-77 water year was only 24 percent of normal, compared to 50 percent of normal for the 1975-76 water year. The second consecutive year of low precipitation and low water content in the snowpack resulted in record low runoff in many of the rivers in the State. Runoff from interior basins ranged from a high of 48 percent of average for the Sacramento River to a low of 7 percent for the Cosumnes River. San Francisco Bay hydrologic basin and Central Coast basin values were a mere 1 and 5 percent of normal, respectively. North Coast basins declined from 60 percent of average in 1975-76 to only 14 percent of normal for 1976-77. Streamflow from the Central Valley, and from the Lahontan and South Coastal areas, was 20 to 30 percent of average. The statewide average runoff amounted to only 24 percent of normal and added greatly to the water deficit caused by the previous dry year. Water year percentages for major hydrologic basins are listed in the table below.

As the water year progressed it became evident, by the lack of the State's seasonal accumulation of snowpack, that the serious drought of 1975-76 was continuing into 1976-77. On April 1, 1976, the statewide snow water content was 40 percent of average; one year later it was 25 percent of average. April-July runoff percentages varied from 8 percent of normal in the Tule River to 46 percent in the drainage area above Oroville Dam with most values in the 18 and 24 percent range.

Detailed data for individual streams are shown in Figure 11 and Table 2, and annual variations on runoff since 1921 for eight streams are shown in Figure 12.

UNIMPAIRED RUNOFF BY AREA

HYDROLOGIC BASIN	WATER YEAR UNIMPAIRED FLOW IN PERCENT OF NORMAL
North Coast	14
San Francisco Bay	1
Central Coast	5
South Coastal Area (1)	26
Central Valley Area	
Sacramento	20
San Joaquin and Tulare Lake	20
Lahontan Area (2)	30
ENTIRE STATE	24

(1) Includes Los Angeles, Santa Ana, and San Diego Basins.
(2) Includes North and South Lahontan Basins.

FIGURE 11. UNIMPAIRED RUNOFF, 1976-77
WATER YEAR OCTOBER 1 – SEPTEMBER 30

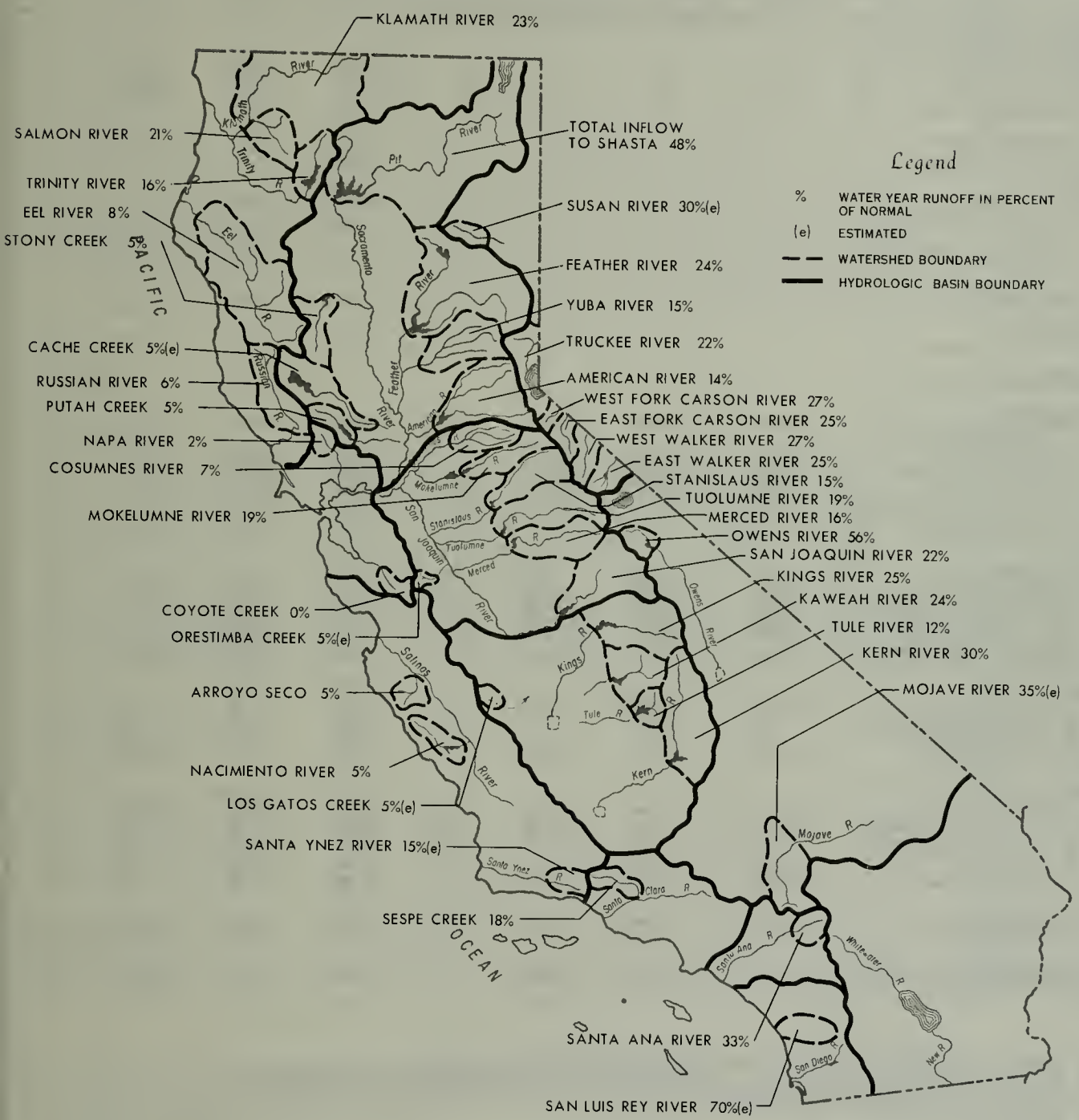


TABLE 2. STREAMFLOW DATA FOR SELECTED STREAMS (ENGLISH UNITS)

BASIN, STREAM, AND STATION (1)	SNOWMELT PERIOD APRIL 1, 1977 - JULY 31, 1977				WATER YEAR OCTOBER 1, 1976 - SEPTEMBER 30, 1977			
	MEASURED FLOW ACRE-FEET	UNIMPAIRED RUNOFF (2) 50-YEAR AVERAGE AC-FT (3)	UNIMPAIRED RUNOFF (2) PERIOD TOTAL ACRE-FEET	UNIMPAIRED RUNOFF (2) PERCENT OF AVERAGE	MEASURED FLOW ACRE-FEET	UNIMPAIRED RUNOFF (2) 50-YEAR AVERAGE AC-FT (3)	UNIMPAIRED RUNOFF (2) ANNUAL TOTAL ACRE-FEET	UNIMPAIRED RUNOFF (2) PERCENT OF AVERAGE
NORTH COAST BASIN								
KLAMATH, COPCO TO ORLEANS (4)	---	---	---	--	1,550,000	4,430,000	1,015,000	23
SALMON AT SOMESBAR	---	---	---	--	257,000	1,220,000	257,000	21
TRINITY AT LEWISTON	36,300	617,000	113,000	18	121,000	1,230,000	199,000	16
EEL AT SCOTIA	---	---	---	--	401,000	5,380,000	404,000	8
RUSSIAN NEAR HEALDSBURG	---	---	---	--	72,800	799,000	47,000	6
SAN FRANCISCO BAY BASIN								
NAPA NEAR ST. HELENA	---	---	---	--	1,300	66,500	1,300	2
COYOTE CREEK NEAR MADRONE	---	---	---	--	22,800	45,400	0	0
CENTRAL COAST BASIN								
ARROYO SECO NEAR SOLEDAD	---	---	---	--	5,100	109,000	5,100	5
NACIMIENTO BELOW NACIMIENTO DAM, NEAR BRADLEY	---	---	---	--	43,800	191,000	8,900	5
SANTA YNEZ ABOVE GIBRALTAR DAM, NEAR SANTA BARBARA	---	---	---	--	(11)	40,800	6,100(5)	15(5)
LOS ANGELES BASIN								
SESPE CREEK NEAR FILLMORE	---	---	---	--	13,600(6)	76,900	13,600	18
SANTA ANA BASIN								
SANTA ANA NEAR MENTONE	---	---	---	--	23,000	55,000	18,000	33
SAN DIEGO BASIN								
SAN LUIS REY AT OCEANSIDE	---	---	---	--	(11)	38,200	26,700(5)	70(5)
SACRAMENTO BASIN								
INFLOW TO SHASTA (8)	798,500	1,780,000	798,500	45	2,628,000	5,480,000	2,628,000	48
SACRAMENTO ABOVE BEND BRIDGE, NEAR RED BLUFF (9)	2,252,000	2,420,000	1,103,000	46	5,065,000	7,950,000	3,422,000	43
FEATHER, INFLOW TO OROVILLE	415,900	1,860,000	397,000	21	1,103,000	4,290,000	1,013,000	24
YUBA AT SMARTVILLE (10)	105,000	1,080,000	198,000	18	303,000	2,270,000	339,000	15
AMERICAN, INFLOW TO FOLSOM	174,000	1,320,000	233,000	18	570,000	2,570,000	357,000	14
STONY CREEK BELOW BLACK BUTTE DAM	---	---	---	--	(11)	387,000	19,400(5)	5(5)
CACHE CREEK NEAR CAPAY	---	---	---	--	(11)	515,000	25,800(5)	5(5)
PUTAH CREEK NEAR WINTERS	---	---	---	--	(11)	360,000	18,000(5)	5(5)
SAN JOAQUIN BASIN								
COSUMNES AT MICHIGAN BAR	5,800	132,000	13,000	10	15,900	351,000	26,000	7
MOKELUMNE, INFLOW TO PARDEE	65,500	466,000	105,500	23	148,000	705,000	134,400	19
STANISLAUS, INFLOW TO MELONES	1,300	717,000	119,600	17	4,700	1,090,000	161,500	15
TUOLUMNE, INFLOW TO DON PEDRO	226,000	1,190,000	275,000	23	479,000	1,790,000	339,000	19
MERCED, INFLOW TO EXCHEQUER	265,000	608,000	128,000	21	260,000	920,000	152,000	17
ORESTIMBA CREEK NEAR NEWMAN	---	---	---	--	(11)	10,800	540(5)	5(5)
SAN JOAQUIN, INFLOW TO MILLERTON	163,000	1,190,000	262,000	22	377,000	1,660,000	362,000	22
TULARE LAKE BASIN								
KINGS, INFLOW TO PINE FLAT	250,000	1,160,000	274,000	24	401,000	1,570,000	386,000	25
KAWEAH, INFLOW TO TERMINUS	62,000	270,000	62,000	23	95,000	403,000	95,000	24
LOS GATOS CREEK NEAR COALINGA	---	---	---	--	(11)	3,000	150(5)	5(5)
TULE, INFLOW TO SUCCESS	4,700	59,200	4,700	8	16,000	133,000	16,000	12
KERN, INFLOW TO ISABELLA	91,500	420,000	91,500	22	186,000	527,000	186,000	35
NORTH LAHONTAN BASIN								
SUSAN AT SUSANVILLE	---	---	---	--	(11)	50,000(5)	15,000(5)	30(5)
TRUCKEE, TAHOE TO FARAD (4)	97,460	264,000	58,390	22	467,000	381,000	847,000	22
WEST FORK CARSON AT WOODFORDS	12,300	51,100	12,300	24	18,600	70,100	18,600	27
EAST FORK CARSON NEAR GARDNERVILLE	42,900	182,000	42,900	24	62,800	248,000	62,800	25
WEST WALKER BELOW LITTLE WALKER, NEAR COLEVILLE	34,900	143,000	34,900	24	47,200	177,000	47,200	27
EAST WALKER NEAR BRIDGEPORT	22,100	60,300	8,300	14	30,200	106,000	26,600	25
SOUTH LAHONTAN BASIN								
OWENS BELOW LONG VALLEY DAM	33,100	59,500	19,700	33	130,800	142,000	79,700	56
MOJAVE AT BARSTOW	---	---	---	--	(11)	90,000(5)	31,500(5)	35(5)
COLORADO RIVER BASIN								
COLORADO, INFLOW TO LAKE POWELL	1,673,000	7,640,000	1,203,000	16	5,374,000	11,300,000	3,575,000	32

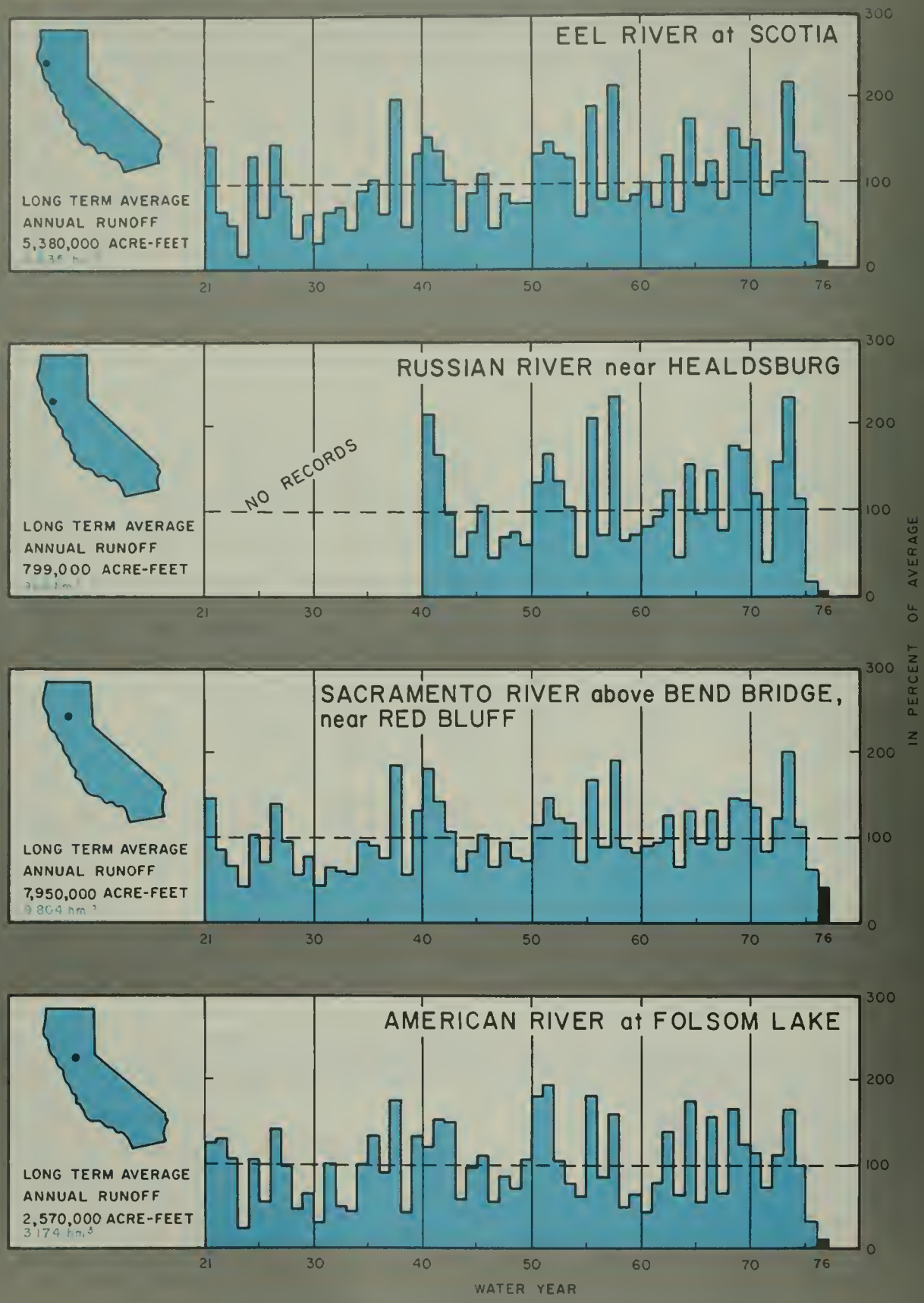
(1) RESERVOIR INFLOW DATA ARE BASED ON OBSERVED FLOWS AT STATIONS DOWNSTREAM FROM LISTED FACILITY.
(2) THE UNIMPAIRED RUNOFF OF A STREAM AT ANY STATION IS THE RUNOFF WHICH WOULD HAVE OCCURRED UNDER NATURAL CONDITIONS, UNALTERED BY UPSTREAM DIVERSIONS, STORAGE DEVELOPMENTS, OR BY EXPORTATION OR IMPORTATION OF WATER TO OR FROM OTHER WATERSHEDS.
(3) AVERAGES ARE COMPUTED FOR THE 50-YEAR PERIOD 1921-70.
(4) ACCRETIONS BETWEEN STATIONS.
(5) ESTIMATED VALUE.
(6) INCLUDES FILLMORE IRRIGATION COMPANY CANAL.
(7) INCLUDES SOUTHERN CALIFORNIA EDISON COMPANY CANAL.
(8) COMPUTED FROM OPERATING RECORDS -- UNADJUSTED FOR UPSTREAM REGULATION.
(9) UNIMPAIRED FLOWS COMPATIBLE TO THOSE AT DISCONTINUED STATION NEAR RED BLUFF.
(10) INCLUDES DEER CREEK.
(11) DATA NOT AVAILABLE AT TIME OF PUBLICATION.

TABLE 2. STREAMFLOW DATA FOR SELECTED STREAMS (METRIC UNITS)

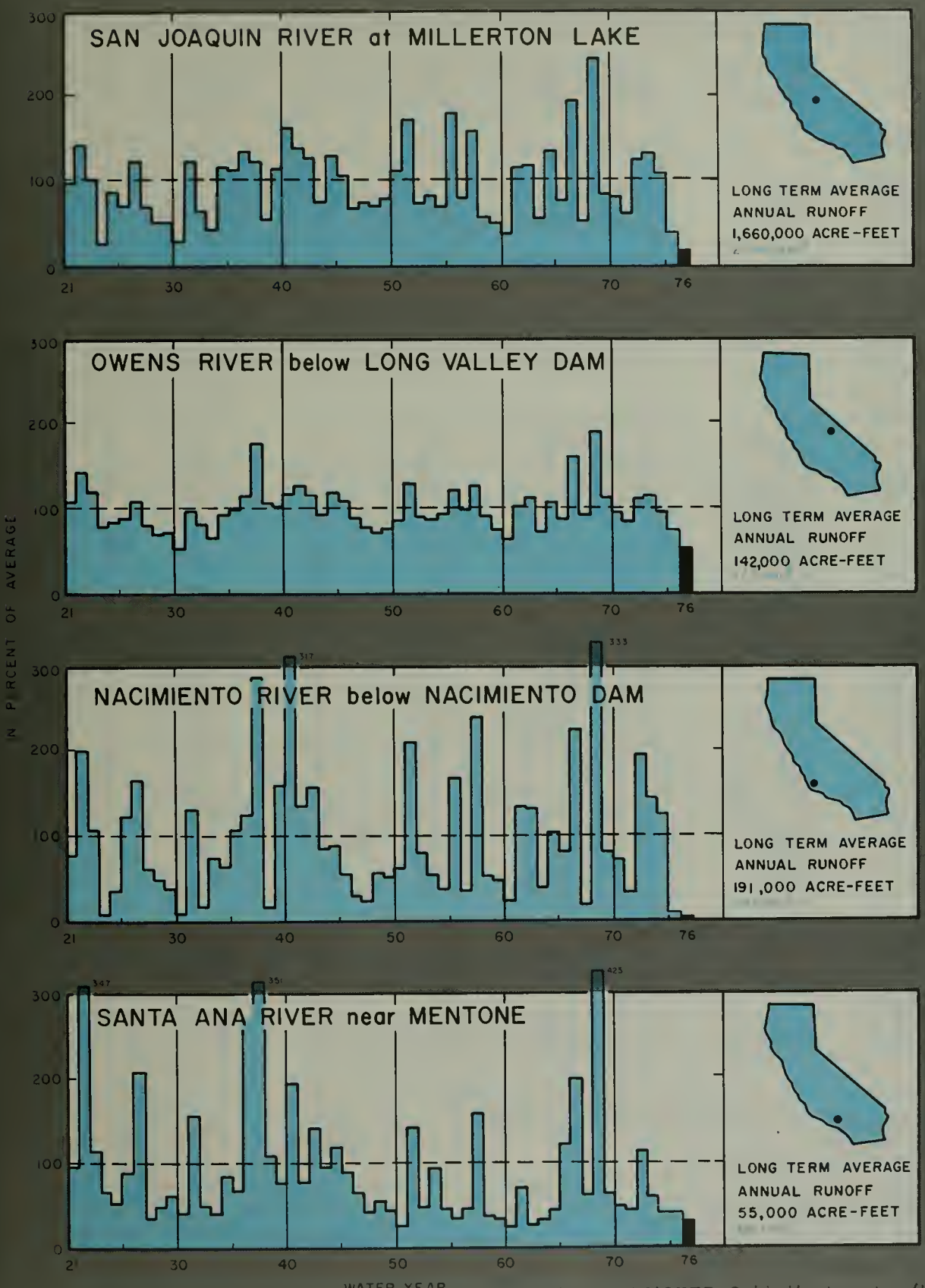
BASIN, STREAM, AND STATION (1)	SNOWMELT PERIOD APRIL 1, 1977 - JULY 31, 1977				WATER YEAR OCTOBER 1, 1976 - SEPTEMBER 30, 1977			
	MEASURED FLOW CUBIC HECTOMETRES	UNIMPAIRED RUNOFF (2)			MEASURED FLOW CUBIC HECTOMETRES	UNIMPAIRED RUNOFF (2)		
		50-YR AVG (3) CUBIC HECTOMETRES	PERIOD TOTAL CUBIC HECTOMETRES	PERCENT OF AVERAGE		50-YR AVG (3) CUBIC HECTOMETRES	ANNUAL TOTAL CUBIC HECTOMETRES	PERCENT OF AVERAGE
NORTH COAST BASIN								
KLAMATH, COPCO TO ORLEANS (4)	---	---	---	--	1 900	5 460	1 250	23
SALMON AT SOMESBAR	---	---	---	--	317	1 510	317	21
TRINITY AT LEWISTON	45	761	139	18	149	1 520	245	16
EEL AT SCOTIA	---	---	---	--	495	6 640	498	8
RUSSIAN NEAR HEALDSBURG	---	---	---	--	90	986	58	6
SAN FRANCISCO BAY BASIN								
NAPA NEAR ST. HELENA	---	---	---	--	2	82	2	2
COYOTE CREEK NEAR MADRONE	---	---	---	--	281	56	0	0
CENTRAL COAST BASIN								
ARROYO SECO NEAR SOLEDAD	---	---	---	--	6	134	6	5
NACIMIENTO BELOW NACIMIENTO DAM, NEAR BRADLEY	---	---	---	--	54	236	11	5
SANTA YNEZ ABOVE GIBRALTAR DAM, NEAR SANTA BARBARA	---	---	---	--	(11)	50	8	15(5)
LOS ANGELES BASIN								
SESPE CREEK NEAR FILLMORE	---	---	---	--	17	95	17	18
SANTA ANA BASIN								
SANTA ANA NEAR MENTONE	---	---	---	--	28	68	22	33
SAN DIEGO BASIN								
SAN LUIS REY AT OCEANSIDE	---	---	---	--	(11)	47	33(5)	70(5)
SACRAMENTO BASIN								
INFLOW TO SHASTA (8)	985	2 200	985	45	3 242	6 760	3 242	48
SACRAMENTO ABOVE BEND BRIDGE, NEAR RED BLUFF (9)	2 778	2 990	1 360	46	6 248	9 810	4 221	43
FEATHER, INFLOW TO OROVILLE	513	2 290	490	21	(11)	5 290	(11)	24
YUBA AT SMARTVILLE (10)	130	1 330	244	18	374	2 800	418	15
AMERICAN, INFLOW TO FOLSOM	215	1 630	287	18	703	3 170	440	14
STONY CREEK BELOW BLACK BUTTE DAM	---	---	---	--	(11)	477	24	5(5)
CACHE CREEK NEAR CAPAY	---	---	---	--	(11)	635	32	5(5)
PUTAH CREEK NEAR WINTERS	---	---	---	--	(11)	444	22	5(5)
SAN JOAQUIN BASIN								
COSUMNES AT MICHIGAN BAR	7	163	16	10	20	433	32	7
MOKELUMNE, INFLOW TO PARDEE	81	575	130	23	183	870	166	19
STANISLAUS, INFLOW TO MELONES	2	884	148	17	6	1 340	199	15
TUOLUMNE, INFLOW TO DON PEDRO	279	1 470	339	23	591	2 210	418	19
MERCED, INFLOW TO EXCHEQUER	327	750	158	21	321	1 130	188	17
ORESTIMBA CREEK NEAR NEWMAN	---	---	---	--	(11)	13	1(5)	5(5)
SAN JOAQUIN, INFLOW TO MILLERTON	201	1 470	323	22	465	2 050	446	22
TULARE LAKE BASIN								
KINGS, INFLOW TO PINE FLAT	308	1 430	338	24	495	1 940	476	25
KAWEAH, INFLOW TO TERMINUS	76	333	(11)	23	(11)	497	(11)	24
LOS GATOS CREEK NEAR COALINGA	---	---	---	--	(11)	4	0 2(5)	5(5)
TULE, INFLOW TO SUCCESS	6	73	6	8	20	164	20	12
KERN, INFLOW TO ISABELLA	113	518	113	22	229	773	229	35
NORTH LAHONTAN BASIN								
SUSAN AT SUSANVILLE	---	---	---	--	(11)	62(5)	19(5)	30(5)
TRUCKEE, TAHOE TO FARAD (4)	120	326	72	22	576	470	105	22
WEST FORK CARSON AT WOODFORDS	15	63	15	24	23	86	23	27
EAST FORK CARSON NEAR GARDNERVILLE	53	225	53	24	77	306	77	25
WEST WALKER BELOW LITTLE WALKER, NEAR COLEVILLE	43	176	43	24	58	218	58	27
EAST WALKER NEAR BRIDGEPORT	27	74	10	14	37	131	33	25
SOUTH LAHONTAN BASIN								
OWENS BELOW LONG VALLEY DAM	41	73	24	33	161	175	98	56
MOJAVE AT BARSTOW	---	---	---	--	(11)	111(5)	39(5)	35(5)
COLORADO RIVER BASIN								
COLORADO, INFLOW TO LAKE POWELL	2 064	9 420	1 484	16	6	13 900	4 409	32

(1) RESERVOIR INFLOW DATA ARE BASED ON OBSERVED FLOWS AT STATIONS DOWNSTREAM FROM LISTED FACILITY.
(2) THE UNIMPAIRED RUNOFF OF A STREAM AT ANY STATION IS THE RUNOFF WHICH WOULD HAVE OCCURRED UNDER NATURAL CONDITIONS, UNALTERED BY UPSTREAM DIVERSIONS, STORAGE DEVELOPMENTS, OR BY EXPORTATION OR IMPORTATION OF WATER TO OR FROM OTHER WATERSHEDS.
(3) AVERAGES ARE COMPUTED FOR THE 50-YEAR PERIOD 1921-70.
(4) ACCRETIONS BETWEEN STATIONS.
(5) ESTIMATED VALUE.
(6) INCLUDES FILLMORE IRRIGATION COMPANY CANAL.
(7) INCLUDES SOUTHERN CALIFORNIA EDISON COMPANY CANAL.
(8) COMPUTED FROM OPERATING RECORDS -- UNADJUSTED FOR UPSTREAM REGULATION.
(9) UNIMPAIRED FLOWS COMPATIBLE TO THOSE AT DISCONTINUED STATION NEAR RED BLUFF.
(10) INCLUDES DEER CREEK.
(11) DATA NOT AVAILABLE AT TIME OF PUBLICATION.

FIGURE 12. ANNUAL UNIMPAIRED



RUNOFF AT SELECTED STATIONS



1 Acre-Foot = .0012335 Cubic Hectometres(hm^3)

TABLE 3. STORAGE IN MAJOR RESERVOIRS (ENGLISH UNITS)

HYDROLOGIC BASIN AND STREAM	RESERVOIR	OPERATOR	CAPACITY 1000 ACRE-FEET (1)	STORAGE AS OF OCTOBER 1 -- 1000 ACRE-FEET (1)			
				10-YEAR AVERAGE 1967-1976	1976	1977	PERCENT OF AVERAGE
NORTH COAST BASIN							
KLAMATH RIVER	UPPER KLAMATH(2)	US BUREAU RECLAMATION	584	297	371	224	76
KLAMATH RIVER	CLEAR LAKE(2)	US BUREAU RECLAMATION	527	253	228	147	58
TRINITY RIVER	CLAIR ENGLE	US BUREAU RECLAMATION	2,450	1,860	1,503	242	13
RUSSIAN RIVER	LAKE MENDOCINO	US CORPS OF ENGINEERS	123	57	34	13	23
SAN FRANCISCO BAY BASIN							
CALAVERAS CREEK	CALAVERAS(3)	CITY-CO SAN FRANCISCO	100	56	30	27	49
CENTRAL COAST BASIN							
SAN ANTONIO RIVER	SAN ANTONIO	MONTEREY CO FCWCD	350	220	243	52	24
NACIMIENTO RIVER	NACIMIENTO	MONTEREY CO FCWCD	350	119	57	22	19
SANTA YNEZ RIVER	CACHUMA	US BUREAU RECLAMATION	205	170	145	112	66
SOUTH COAST (8)							
COYOTE CREEK	CASITAS	CASITAS MUNICIPAL WD	254	193	204	182	94
PIRU CREEK	LAKE PIRU	UNITED WATER CON DIST	101	24	12	14	57
PIRU CREEK	PYRAMID(3)	CALIF DEPT WATER RES	171	164(6)	163	165	100
CASTAIC CREEK	CASTAIC(3)	CALIF DEPT WATER RES	324	213(6)	237	58	26
--	PERRIS(3)	CALIF DEPT WATER RES	132	92(6)	87	75	81
TRIB CAJALCO CREEK	LAKE MATHEWS(4)	METROPOLITAN WATER DIST	182	111	90	109	98
SAN JACINTO RIVER	LAKE ELSINORE	CALIF DEPT PARKS AND REC	125	22	9	8	36
SAN LUIS REY RIVER	HENSHAW	VISTA IRRIGATION DIST	204	7	2	1	18
SAN DIEGO RIVER	EL CAPITAN(3)	CITY OF SAN DIEGO	117	22	9	15	69
CENTRAL VALLEY (9)							
SACRAMENTO RIVER	SHASTA	US BUREAU RECLAMATION	4,550	3,150	1,300	631	20
CLEAR CREEK	WHISKEYTOWN	US BUREAU RECLAMATION	241	223	239	217	97
N FK FEATHER RIVER	LAKE ALMANOR	PAC GAS AND ELEC CO	1,310	821	579	542	66
BUCKS CREEK	BUCKS LAKE	PAC GAS AND ELEC CO	103	63	49	37	58
FEATHER RIVER	OROVILLE	CALIF DEPT WATER RES	3,540	2,461(6)	1,828	915	36
NORTH YUBA RIVER	NEW BULLARDS BAR	YUBA CO WATER AGENCY	961	594(6)	344	258	42
SOUTH YUBA RIVER	SPAULDING SYSTEM	PAC GAS AND ELEC CO	137	65	47	62	95
BEAR RIVER	CAMP FAR WEST	SO SUTTER WATER DIST	103	49	4	3	6
M FK AMERICAN RIVER	FRENCH MEADOWS	PLACER CO WATER AGENCY	134	83	41	38	46
RUBICON RIVER	HELL HOLE	PLACER CO WATER AGENCY	208	130	109	78	60
SILVER CREEK	UNION VALLEY	SACRAMENTO MUN UD	271	169	34	57	34
AMERICAN RIVER	FOLSOM	US BUREAU RECLAMATION	1,010	676	416	147	22
STONY CREEK	BLACK BUTTE	US CORPS OF ENGINEERS	160	30	21	1	5
CACHE CREEK	CLEAR LAKE	YOLO COUNTY FCWCD	420	71	0	0	0
N FK CACHE CREEK	INDIAN VALLEY	YOLO COUNTY FCWCD	300	0(6)	0	0	0
PUTAH CREEK	LAKE BERRYESSA	US BUREAU RECLAMATION	1,600	1,340	1,039	759	57
N FK MOKELUMNE RIVER	SALT SPRINGS	PAC GAS AND ELEC CO	139	77	27	4	5
MOKELUMNE RIVER	PAROEE	EAST BAY MUN UD	210	186	106	83	44
MOKELUMNE RIVER	CAMANCHE	EAST BAY MUN UD	432	287	186	55	19
CALAVERAS RIVER	NEW HOGAN	US CORPS OF ENGINEERS	325	145	71	11	8
STANISLAUS RIVER	MELONES	PAC GAS AND ELEC CO	113	11	3	3	27
CHERRY CREEK	CHERRY LAKE	CITY-CO SAN FRANCISCO	269	151	120	105	70
TUOLUMNE RIVER	HETCH HETCHY	CITY-CO SAN FRANCISCO	360	239	121	113	47
TUOLUMNE RIVER	DON PEDRO	TURLOCK-MODESTO ID	2,030	897(6)	687	307	33
MERCED RIVER	LAKE MCCLURE	MERCED IRRIG DISTRICT	1,030	562	244	94	17
SAN JOAQUIN RIVER	MAMMOTH POOL	SO CALIFORNIA EDISON CO	123	36	21	20	56
MONO CREEK	THOMAS A EDISON	SO CALIFORNIA EDISON CO	125	87	10	6	7
STEVENSON CREEK	SHAVER LAKE	SO CALIFORNIA EDISON CO	135	74	28	29	39
SAN JOAQUIN RIVER	MILLERTON LAKE	US BUREAU RECLAMATION	521	181	224	197	109
SAN LUIS CREEK	SAN LUIS(3)	US BUREAU REC-CALIF DWR	2,040	1,521(6)	678	274	17
HELMS CREEK	COURTRIGHT	PAC GAS AND ELEC CO	123	42	35	1	2
N FK KINGS RIVER	WISHON	PAC GAS AND ELEC CO	128	89	64	80	90
KINGS RIVER	PINE FLAT	US CORPS OF ENGINEERS	1,000	428	208	68	16
KAWEAH RIVER	TERMINUS	US CORPS OF ENGINEERS	150	18	17	10	54
KERN RIVER	ISABELLA	US CORPS OF ENGINEERS	570	185	70	36	20
LAHONTAN (10)							
LITTLE TRUCKEE RIVER	STAMPEDE(2)	US BUREAU RECLAMATION	227	135(6)	58	31	22
TRUCKEE RIVER	LAKE TAHOE(2,7)	US BUREAU RECLAMATION	745	528	308	0	0
OWENS RIVER	LAKE CROWLEY	LOS ANGELES DEPT WP	184	131	53	52	40
COLORADO RIVER BASIN							
COLORADO RIVER	LAKE POWELL(2,7)	US BUREAU RECLAMATION	25,000	14,085	19,641	16,144	115
COLORADO RIVER	LAKE MEAD(2,7)	US BUREAU RECLAMATION	26,100	17,638	20,062	20,205	115
COLORADO RIVER	LAKE MOHAVE(2,7)	US BUREAU RECLAMATION	1,810	1,436	1,721	1,465	102
COLORADO RIVER	LAKE HAVASU(2,7)	US BUREAU RECLAMATION	619	563	581	566	100

(1) CAPACITY AND STORAGE VALUES ROUNDED TO NEAREST THREE SIGNIFICANT NUMBERS.
(2) INTERSTATE RESERVOIR USED JOINTLY BY CALIFORNIA AND ADJACENT STATES.
(3) INCLUDES FOREIGN WATER.
(4) STORES ONLY IMPORTED COLORADO RIVER WATER.
(5) NEW RESERVOIR -- AVERAGE CONSIDERED EQUAL TO CURRENT STORAGE.
(6) LESS THAN 10-YEAR AVERAGE.
(7) DATA BASED ON ACTIVE OR USABLE CAPACITY TABLES.
(8) SOUTH COAST INCLUDES LOS ANGELES, SANTA ANA, AND SAN DIEGO BASINS.
(9) CENTRAL VALLEY INCLUDES SACRAMENTO, SAN JOAQUIN, AND TULARE LAKE BASINS.
(10) LAHONTAN INCLUDES NORTH AND SOUTH LAHONTAN BASINS.

TABLE 3. STORAGE IN MAJOR RESERVOIRS (METRIC UNITS)

HYDROLOGIC BASIN AND STREAM	RESERVOIR	OPERATOR	CAPACITY CUBIC HECTOMETRES (1)	STORAGE AS OF OCTOBER 1 -- CUBIC HECTOMETRES (1)			
				10-YEAR AVERAGE 1967-1976	1976	1977	PERCENT OF AVERAGE
NORTH COAST BASIN							
KLAMATH RIVER	UPPER KLAMATH(2)	US BUREAU RECLAMATION	720	366	458	276	76
KLAMATH RIVER	CLEAR LAKE(2)	US BUREAU RECLAMATION	650	312	281	181	58
TRINITY RIVER	CLAIR ENGLE	US BUREAU RECLAMATION	3 020	2 294	1 854	300	13
RUSSIAN RIVER	LAKE MENDOCINO	US CORPS OF ENGINEERS	152	70	42	16	23
SAN FRANCISCO BAY BASIN							
CALAVERAS CREEK	CALAVERAS(3)	CITY-CO SAN FRANCISCO	123	69	37	33	49
CENTRAL COAST BASIN							
SAN ANTONIO RIVER	SAN ANTONIO	MONTEREY CO FCWCD	432	271	300	64	24
NACIMIENTO RIVER	NACIMIENTO	MONTEREY CO FCWCD	432	147	70	27	19
SANTA YNEZ RIVER	CACHUMA	US BUREAU RECLAMATION	253	210	179	138	66
SOUTH COAST (8)							
COYOTE CREEK	CASITAS	CASITAS MUNICIPAL WD	313	386	252	225	94
PIRU CREEK	LAKE PIRU	UNITED WATER CON DIST	125	30	15	17	57
PIRU CREEK	PYRAMID(3)	CALIF DEPT WATER RES	211	202(6)	201	203	100
CASTAIC CREEK	CASTAIC(3)	CALIF DEPT WATER RES	400	263(6)	292	72	26
--	PERRIS(3)	CALIF DEPT WATER RES	163	113(6)	107	93	81
TRIB CAJALCO CREEK	LAKE MATHEWS(4)	METROPOLITAN WATER DIST	224	137	111	134	98
SAN JACINTO RIVER	LAKE ELSINORE	CALIF DEPT PARKS AND REC	154	27	11	10	36
SAN LUIS REY RIVER	HENSHAW	VISTA IRRIGATION DIST	252	9	3	1	18
SAN DIEGO RIVER	EL CAPITAN(3)	CITY OF SAN DIEGO	144	27	11	19	69
CENTRAL VALLEY (9)							
SACRAMENTO RIVER	SHASTA	US BUREAU RECLAMATION	5 610	3 886	1 604	778	20
CLEAR CREEK	WHISKEYTOWN	US BUREAU RECLAMATION	297	275	295	268	97
N FK FEATHER RIVER	LAKE ALMANOR	PAC GAS AND ELEC CO	1 620	1 013	714	669	66
BUCKS CREEK	BUCKS LAKE	PAC GAS AND ELEC CO	127	78	60	46	58
FEATHER RIVER	OROVILLE	CALIF DEPT WATER RES	4 370	3 036(6)	2 255	1 129	36
NORTH YUBA RIVER	NEW BULLARDS BAR	YUBA CO WATER AGENCY	1 190	733(6)	424	318	42
SOUTH YUBA RIVER	SPAULDING SYSTEM	PAC GAS AND ELEC CO	169	80	58	76	95
BEAR RIVER	CAMP FAR WEST	SO SUTTER WATER DIST	127	60	5	4	6
M FK AMERICAN RIVER	FRENCH MEADOWS	PLACER CO WATER AGENCY	165	102	50	47	46
RUBICON RIVER	HELL HOLE	PLACER CO WATER AGENCY	257	160	134	96	60
SILVER CREEK	UNION VALLEY	SACRAMENTO MUN UD	334	208	42	70	34
AMERICAN RIVER	FOLSOM	US BUREAU RECLAMATION	1 250	834	513	181	22
STONY CREEK	BLACK BUTTE	US CORPS OF ENGINEERS	197	37	26	1	5
CACHE CREEK	CLEAR LAKE	YOLO COUNTY FCWCD	518	88	0	0	0
N FK CACHE CREEK	INDIAN VALLEY	YOLO COUNTY FCWCD	370	0(6)	0	0	0
PUTAH CREEK	LAKE BERRYESSA	US BUREAU RECLAMATION	1 970	1 653	1 282	936	57
N FK MOKELUMNE RIVER	SALT SPRINGS	PAC GAS AND ELEC CO	171	95	33	5	5
MOKELUMNE RIVER	PAROEE	EAST BAY MUN UD	259	229	131	102	44
MOKELUMNE RIVER	CAMANCHE	EAST BAY MUN UD	533	354	229	68	19
CALAVERAS RIVER	NEW HOGAN	US CORPS OF ENGINEERS	401	179	88	14	8
STANISLAUS RIVER	MELONES	PAC GAS AND ELEC CO	139	14	4	4	27
CHERRY CREEK	CHERRY LAKE	CITY-CO SAN FRANCISCO	332	186	148	130	70
TUOLUMNE RIVER	HETCH HETCHY	CITY-CO SAN FRANCISCO	444	295	149	139	47
TUOLUMNE RIVER	DON PEDRO	TURLOCK-MODESTO ID	2 500	1 106	847	379	33
MERCED RIVER	LAKE MCCLURE	MERCED IRRIG DISTRICT	1 270	693	301	116	17
SAN JOAQUIN RIVER	MAMMOTH POOL	SO CALIFORNIA EDISON CO	152	44	26	25	56
MONO CREEK	THOMAS A EDISON	SO CALIFORNIA EDISON CO	154	107	12	7	7
STEVENSON CREEK	SHAVER LAKE	SO CALIFORNIA EDISON CO	167	91	35	36	39
SAN JOAQUIN RIVER	HILLERTON LAKE	US BUREAU RECLAMATION	643	223	276	243	109
SAN LUIS CREEK	SAN LUIS(3)	US BUREAU REC-CALIF DWR	2 520	1 876(6)	836	338	17
HELMS CREEK	COURTRIGHT	PAC GAS AND ELEC CO	152	52	43	1	2
N FK KINGS RIVER	WISHON	PAC GAS AND ELEC CO	158	110	79	99	90
KINGS RIVER	PINE FLAT	US CORPS OF ENGINEERS	1 230	528	257	84	16
KAWEAH RIVER	TERMINUS	US CORPS OF ENGINEERS	185	22	21	12	54
KERN RIVER	ISABELLA	US CORPS OF ENGINEERS	703	228	86	44	20
LAHONTAN (10)							
LITTLE TRUCKEE RIVER	STAMPEDE(2)	US BUREAU RECLAMATION	280	167(6)	72	38	22
TRUCKEE RIVER	LAKE TAHOE(2,7)	US BUREAU RECLAMATION	919	651	380	0	0
OWENS RIVER	LAKE CROWLEY	LOS ANGELES DEPT WP	227	162	65	64	40
COLORADO RIVER BASIN							
COLORADO RIVER	LAKE POWELL(2,7)	US BUREAU RECLAMATION	30 800	17 374	24 227	19 914	115
COLORADO RIVER	LAKE MEAD(2,7)	US BUREAU RECLAMATION	32 200	21 756	24 746	24 923	115
COLORADO RIVER	LAKE MOHAVE(2,7)	US BUREAU RECLAMATION	2 230	1 771	2 123	1 807	102
COLORADO RIVER	LAKE HAVASU(2,7)	US BUREAU RECLAMATION	764	694	717	698	100

(1) CAPACITY AND STORAGE VALUES ROUNDED TO NEAREST THREE SIGNIFICANT NUMBERS.
(2) INTERSTATE RESERVOIR USED JOINTLY BY CALIFORNIA AND ADJACENT STATES.
(3) INCLUDES FOREIGN WATER.
(4) STORES ONLY IMPORTED COLORADO RIVER WATER.
(5) NEW RESERVOIR -- AVERAGE CONSIDERED EQUAL TO CURRENT STORAGE.
(6) LESS THAN 10-YEAR AVERAGE.
(7) DATA BASED ON ACTIVE OR USABLE CAPACITY TABLES.
(8) SOUTH COAST INCLUDES LOS ANGELES, SANTA ANA, AND SAN DIEGO BASINS.
(9) CENTRAL VALLEY INCLUDES SACRAMENTO, SAN JOAQUIN, AND TULARE LAKE BASINS.
(10) LAHONTAN INCLUDES NORTH AND SOUTH LAHONTAN BASINS.

RESERVOIR STORAGE

Water storage in 153 major reservoirs comprising most of the State's storage capacity was about 16 900 cubic hectometres (13.7 million acre-feet) on October 1, 1976. One year later, storage in these same reservoirs had declined to 9 700 hm^3 (7.9 million acre-feet) or 38 percent of average and 23 percent of available capacity.

October storage in 78 major reservoirs in the Central Valley area was 7 278 hm^3 (5.9 million acre-feet), a decline of 4 810 hm^3 (3.9 million acre-feet) during the year. The October 1977 storage averaged about 36 percent of normal as compared to 58 percent one year before.

By the end of the water year 1976-77, most reservoirs had reached all-time low storage records. The decline in storage during the year ranged from 18 percent in the South Coastal area to 82 percent in the North Coastal area. Interstate storage reservoirs on the Colorado River (Lakes Powell, Mead, Mohave, and Havasu) had a moderate decline during the water year. Combined storage in these reservoirs was 111 percent of October 1 average as compared to 132 percent of October 1 average a year before.

TABLE 4. SUMMARY OF RESERVOIR STORAGE DATA

THOUSANDS OF ACRE-FEET (CUBIC HECTOMETRES)

BASIN	NUMBER OF RESERVOIRS	TOTAL CAPACITY	10-YEAR AVERAGE 1967-76	STORAGE OCTOBER 1 1977	PERCENT OF AVERAGE	PERCENT OF CAPACITY
INTRASTATE:						
NORTH COAST	8	2,940 (3 630)	2,120 (2 615)	389 (480)	18	13
SAN FRANCISCO BAY	18	696 (859)	405 (500)	286 (353)	70	41
CENTRAL COAST	9	1,050 (1 300)	618 (762)	261 (322)	42	25
SOUTH COAST (1)	31	2,300 (2 840)	1,105 (1 363)	853 (1 052)	77	37
SACRAMENTO	43	16,300 (20 100)	10,714 (13 216)	4,218 (5 203)	39	26
SAN JOAQUIN AND TULARE LAKE	36	10,700 (13 200)	5,683 (7 010)	1,724 (2 127)	30	16
LAHONTAN (2)	8	426 (525)	308 (380)	153 (189)	50	36
SUBTOTAL	153	34,400 (42 400)	20,750 (25 595)	7,880 (9 720)	38	23
INTERSTATE:						
NORTH COAST	3	1,210 (1 490)	591 (729)	376 (464)	64	31
LAHONTAN (2)	5	1,080 (1 330)	717 (884)	36 (44)	5	3
COLORADO RIVER (3)	4	53,500 (66 000)	33,722 (41 596)	38,380 (47 341)	114	72
SUBTOTAL (3)	12	55,800 (68 800)	35,030 (43 210)	38,790 (47 848)	111	69
TOTAL (3)	165	90,200 (111 000)	55,780 (68 804)	46,670 (57 567)	84	52

(1) INCLUDES LOS ANGELES, SANTA ANA, AND SAN DIEGO BASINS.
(2) INCLUDES NORTH AND SOUTH LAHONTAN BASINS
(3) INCLUDES DATA FOR LAKE MEAD AND LAKE POWELL WHICH REGULATE FLOW OF THE LOWER COLORADO RIVER, THE MAJOR SOURCE OF WATER FOR THE COLORADO RIVER BASIN AND SOUTH COAST AREA.

Tabulated below are 1976-77 water supply forecasts published in Bulletin 120, and the observed unimpaired runoff for 25 major forecast points. Error percentages compare May 1 forecasts to the observed. Forecasts are always subject to limitations in forecasting procedures, and in the uncertainty of future weather. Forecast errors due to these limitations usually range between 5-10 percent. Unprecedented drought conditions impaired conditions which resulted in forecasts lower than observed.

TABLE 5. COMPARISONS OF WATER SUPPLY FORECASTS WITH OBSERVED UNIMPAIRED RUNOFF

Flows in 1,000 Acre-feet (Cubic Hectometres)

STREAM AND STATION	FORECASTS								OBSERVED FLOWS		FORECAST ERROR IN PERCENT MAY 1 FORECAST	
	FEBRUARY 1		MARCH 1		APRIL 1		MAY 1					
	APR-JULY	WATER YR	APR-JULY	WATER YR	APR-JULY	WATER YR	APR-JULY	WATER YR	APR-JULY	WATER YR	APR-JULY	WATER YR
TRINITY AT LEWISTON	315 (389)	-- (--)	265 (327)	-- (--)	240 (296)	-- (--)	160 (197)	-- (--)	113 (139)	-- (--)	+ 42	--
SACRAMENTO R. - INFLOW TO SHASTA LAKE	180 (222)	305 (376)	150 (185)	245 (302)	145 (179)	240 (296)	100 (123)	190 (234)	64 (79)	162 (200)	+ 56	+ 17
McCLOUD R. - INFLOW TO SHASTA LAKE	270 (333)	715 (882)	240 (296)	625 (771)	225 (277)	610 (752)	185 (228)	565 (697)	184 (227)	581 (717)	0	- 3
PIT R. - INFLOW TO SHASTA LAKE	625 (771)	2,055 (2 535)	510 (629)	1,945 (2 399)	465 (574)	1,900 (2 344)	395 (487)	1,815 (2 239)	650 (802)	2,011 (2 481)	- 39	- 10
TOTAL INFLOW TO SHASTA LAKE	1,100 (1 357)	3,150 (3 886)	900 (1 110)	2,650 (3 269)	845 (1 042)	2,550 (3 145)	685 (845)	2,370 (2 923)	798 (984)	2,628 (3 242)	- 14	- 10
SACRAMENTO R. ABOVE BEND BRIDGE	1,400 (1 727)	4,070 (5 020)	1,120 (1 382)	3,250 (4 009)	1,025 (1 264)	3,100 (3 824)	850 (1 048)	2,900 (3 577)	1,103 (1 360)	3,422 (4 221)	- 23	- 15
FEATHER R. - INFLOW TO OROVILLE RES.	830 (1 024)	1,700 (2 097)	600 (740)	1,210 (1 493)	510 (629)	1,100 (1 357)	335 (413)	915 (1 129)	397 (490)	1,013 (1 250)	- 16	- 10
YUBA R. AT SMARTVILLE	270 (333)	560 (691)	200 (247)	330 (407)	190 (234)	325 (401)	155 (191)	290 (358)	198 (244)	339 (418)	- 22	- 14
AMERICAN R. - INFLOW TO FOLSOM RES.	310 (382)	580 (715)	225 (278)	340 (419)	210 (259)	340 (419)	170 (210)	300 (370)	233 (287)	357 (440)	- 27	- 16
COSUMNES R. AT MICHIGAN BAR	35 (41)	70 (86)	12 (15)	21 (26)	10 (12)	19 (23)	5 (6)	14 (17)	13 (16)	26 (32)	- 62	- 46
MOKELUMNE R. - INFLOW TO PAROEE RES.	150 (185)	200 (247)	100 (123)	125 (154)	90 (111)	115 (142)	65 (80)	90 (111)	106 (131)	134 (165)	- 39	- 33
STANISLAUS R. - INFLOW TO MELONES RES.	275 (339)	360 (444)	200 (247)	245 (302)	180 (222)	225 (277)	120 (148)	165 (204)	120 (148)	162 (200)	0	+ 2
TUOLUMNE R. - INFLOW TO DON PEORO RES.	470 (580)	625 (771)	330 (407)	400 (493)	275 (339)	340 (419)	205 (253)	270 (333)	275 (339)	339 (418)	- 25	- 20
MERCED R. - INFLOW TO EXCHEQUER RES.	225 (278)	285 (352)	165 (204)	190 (234)	135 (166)	160 (197)	90 (111)	115 (142)	128 (158)	152 (187)	- 30	- 24
SAN JOAQUIN R. - INFLOW TO MILLERTON LAKE	470 (580)	630 (777)	270 (333)	375 (463)	230 (284)	330 (407)	185 (228)	280 (245)	262 (323)	362 (447)	- 29	- 23
KINGS R. - INFLOW TO PINE FLAT RES.	465 (573)	630 (777)	230 (284)	345 (426)	200 (247)	310 (382)	195 (241)	305 (376)	274 (338)	386 (476)	- 29	- 21
KAWEAH R. - INFLOW TO TERMINUS RES.	115 (142)	180 (222)	60 (74)	92 (113)	50 (62)	82 (101)	40 (49)	71 (87)	62 (76)	95 (117)	- 35	- 25
TULE R. - INFLOW TO SUCCESS RES.	14 (17)	30 (37)	5 (6)	17 (21)	4 (5)	15 (19)	3 (4)	14 (17)	5 (6)	16 (20)	- 40	- 13
KERN R. - INFLOW TO ISABELLA RES.	125 (154)	235 (290)	95 (117)	190 (234)	80 (99)	170 (209)	65 (80)	155 (191)	91 (112)	186 (229)	- 29	- 17
TRUCKEE R. TAHOE TO FARAO	90 (111)	-- (--)	75 (93)	-- (--)	65 (80)	-- (--)	50 (62)	-- (--)	58 (72)	-- (--)	- 14	--
LAKE TAHOE RISE	0.40' (.12m)	-- (--)	0.37' (.11m)	-- (--)	0.25' (.08m)	-- (--)	0.15' (.05m)	-- (--)	0.31' (.09m)	-- (--)	- 52	--
EAST CARSON R. NEAR GARDNERVILLE	65 (80)	-- (--)	55 (68)	-- (--)	45 (56)	-- (--)	40 (49)	-- (--)	43 (53)	-- (--)	- 8	--
WEST CARSON AT WOODFOROS	20 (25)	-- (--)	13 (16)	-- (--)	12 (15)	-- (--)	10 (12)	-- (--)	12 (15)	-- (--)	- 17	--
EAST WALKER R. NEAR BRIDGEPORT	12 (15)	-- (--)	10 (12)	-- (--)	7 (9)	-- (--)	5 (6)	-- (--)	8 (10)	-- (--)	- 38	--
WEST WALKER R. NEAR COLEVILLE	55 (68)	-- (--)	45 (56)	-- (--)	35 (43)	-- (--)	30 (37)	-- (--)	35 (43)	-- (--)	- 14	--

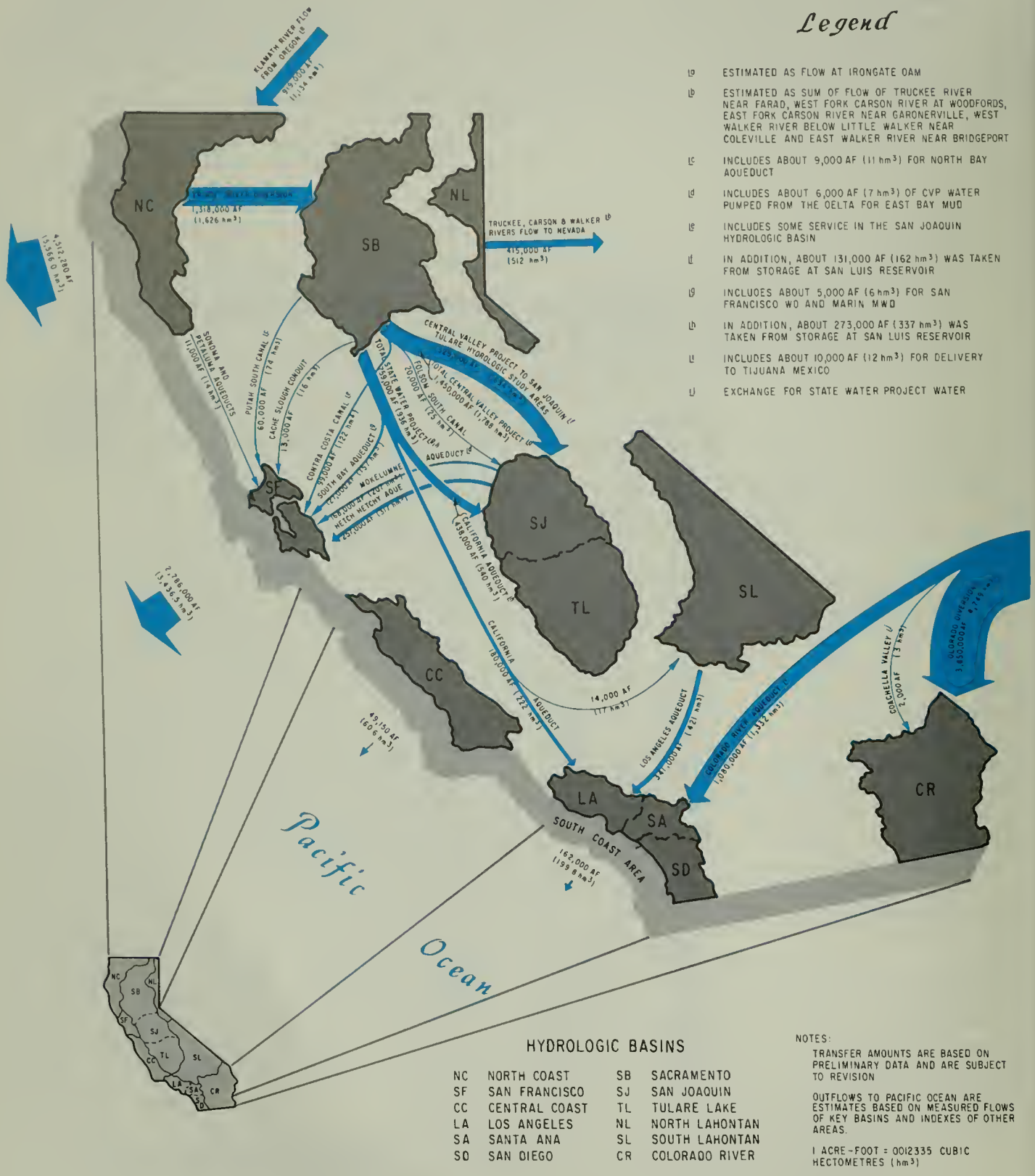
$$\text{FORECAST ERRORS IN PERCENT} = \frac{(\text{FORECAST} - \text{OBSERVED})}{\text{OBSERVED}} \times 100$$

MAY 1 APRIL - JULY FORECASTS AVERAGE ABSOLUTE ERROR = 28% (25 FORECASTS)

MAY 1 WATER YEAR FORECASTS AVERAGE ABSOLUTE ERROR = 18% (18 FORECASTS)

Note 1000 Acre-Feet = 1.2335 Cubic Hectometres

FIGURE 13. WATER TRANSFERS AND OUTFLOW, 1976-77



HYDROLOGIC BASINS

NC	NORTH COAST	SB	SACRAMENTO
SF	SAN FRANCISCO	SJ	SAN JOAQUIN
CC	CENTRAL COAST	TL	TULARE LAKE
LA	LOS ANGELES	NL	NORTH LAHONTAN
SA	SANTA ANA	SL	SOUTH LAHONTAN
SD	SAN DIEGO	CR	COLORADO RIVER

NOTES:

TRANSFER AMOUNTS ARE BASED ON PRELIMINARY DATA AND ARE SUBJECT TO REVISION

OUTFLOWS TO PACIFIC OCEAN ARE ESTIMATES BASED ON MEASURED FLOWS OF KEY BASINS AND INDEXES OF OTHER AREAS.

1 ACRE-FOOT = 0012335 CUBIC HECTOMETRES (hm³)

WATER TRANSFERS AND OUTFLOW

The 1976-77 water year was the driest of record for many areas of California. Reservoir storage was depleted by the previous dry year and, although water demands were high, exports were generally much less because of shortages in supply. One notable exception was water impacted through the Colorado River Aqueduct to the South Coastal area which increased nearly 370 hm^3 (300,000 acre-feet) to offset loss of State Water Project (SWP) supplies not impacted from Northern California. This switch was part of the exchange program whereby Metropolitan Water District of Southern California (MWD) made 495 hm^3 (400,000 acre-feet) of its 1977 SWP allocation available to other users in the North who were suffering from the drought.

Another major export which showed substantial increases over 1976 water year amounts was the Central Valley Project (CVP) Trinity River diversion, which increased about 345 hm^3 (280,000 acre-feet). Much of this transfer was water taken out of Clair Engle Reservoir storage to meet Central Valley demands.

Estimated CVP exports from the Delta were 1 789 hm^3 (1,450,000 acre-feet), only about half of what they were in 1975-76. Many CVP irrigation users were allocated only 25 percent of normal supplies.

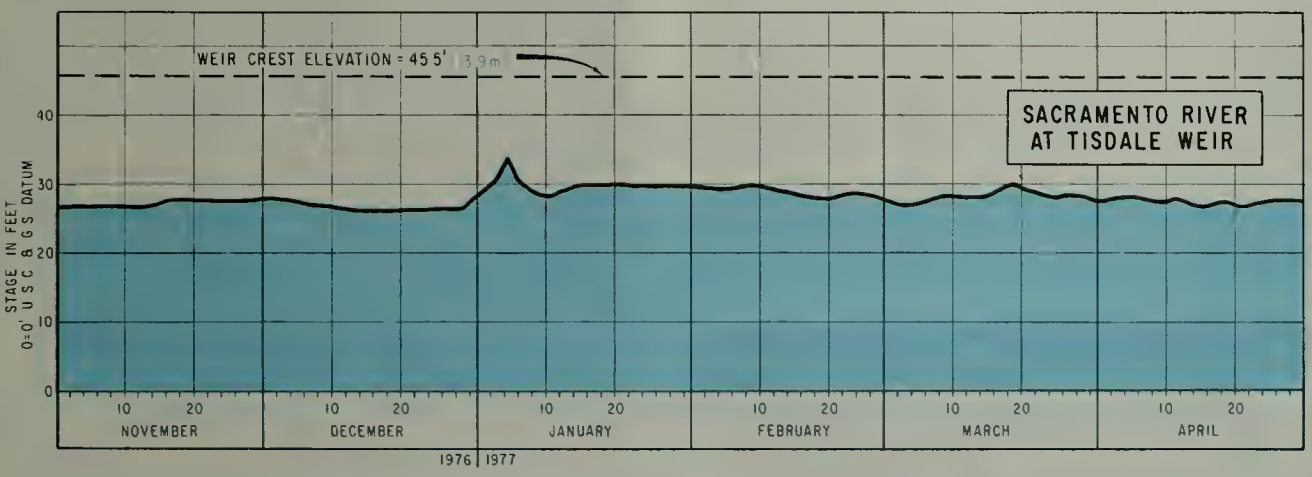
Total SWP Delta exports were about 936 hm^3 (759,000 acre-feet), nearly 1 480 hm^3 (1,200,000 acre-feet) less than the previous year. In addition, some 337 hm^3 (273,000 acre-feet) were taken out of SWP San Luis Reservoir storage. SWP transfers to Southern California were 239 hm^3 (194,000 acre-feet), only about one-fourth that of the 1975-76 water year. Most of the amount pumped over the Tehachapi Mountains was pumped during the first five months of the water year, from October through February.

Surprisingly, Colorado River diversions to the Colorado Desert Hydrologic Basin were also down slightly, from about 4 940 to 4 749 hm^3 (4,005,000 to 3,850,000 acre-feet). The reduction is attributed to the effects of unusual rainstorms in the desert and in part to the Imperial Irrigation District's program of water conservation.

RUNOFF—The normally dry Los Angeles River at its confluence with the Arroyo Seco was flowing at a rate of 8,000 cubic feet a second.

In the second year of the drought in California, the lack of flood conditions during the normal flood season was even greater than during the first drought year. Whereas the year 1975-76 broke the uninterrupted record of 63 years of winter overflow at Tisdale Weir on the Sacramento River, the year 1976-77 extended the period on non-overflow. The peak stage in 1976-77 during the entire flood season was 3.5 metres (11.5 feet) below the weir crest. This was 3.0 metres (10 feet) lower than the previous year. Hydrographs of selected (representative) streams might easily have been mistaken for summer flows rather than the "flood season" flows they really were. Peak flows and stages for the year presented in Appendix B further illustrate the infrequency of even momentary winter rises in California's streams.

FIGURE 14. HYDROGRAPH OF TISDALE WEIR



An unseasonable storm in early May 1977 along the South Coastal Area included tornado force winds, and produced rainfall amounts varying from about 38 millimetres (0.15 inch) in the San Francisco Bay Area to nearly 51 millimetres (2 inches) at Los Angeles Civic Center, and 76 millimetres (3 inches) at Mt. Wilson. Damage included uprooted trees and damaged roofs and windows. The single storm reportedly produced the wettest May in 56 years in Los Angeles. The month of June produced some summer thunderstorms in the Southern California desert areas with no significant damage.

IMPERIAL VALLEY AWASH
AFTER DOREEN COMES OVER

INDOOR POOL AND JACUZZI AFTER SECOND NIGHT

THE AFTERMATH OF DOREEN
SEPT. 1, 1977
IMPERIAL COUNTY

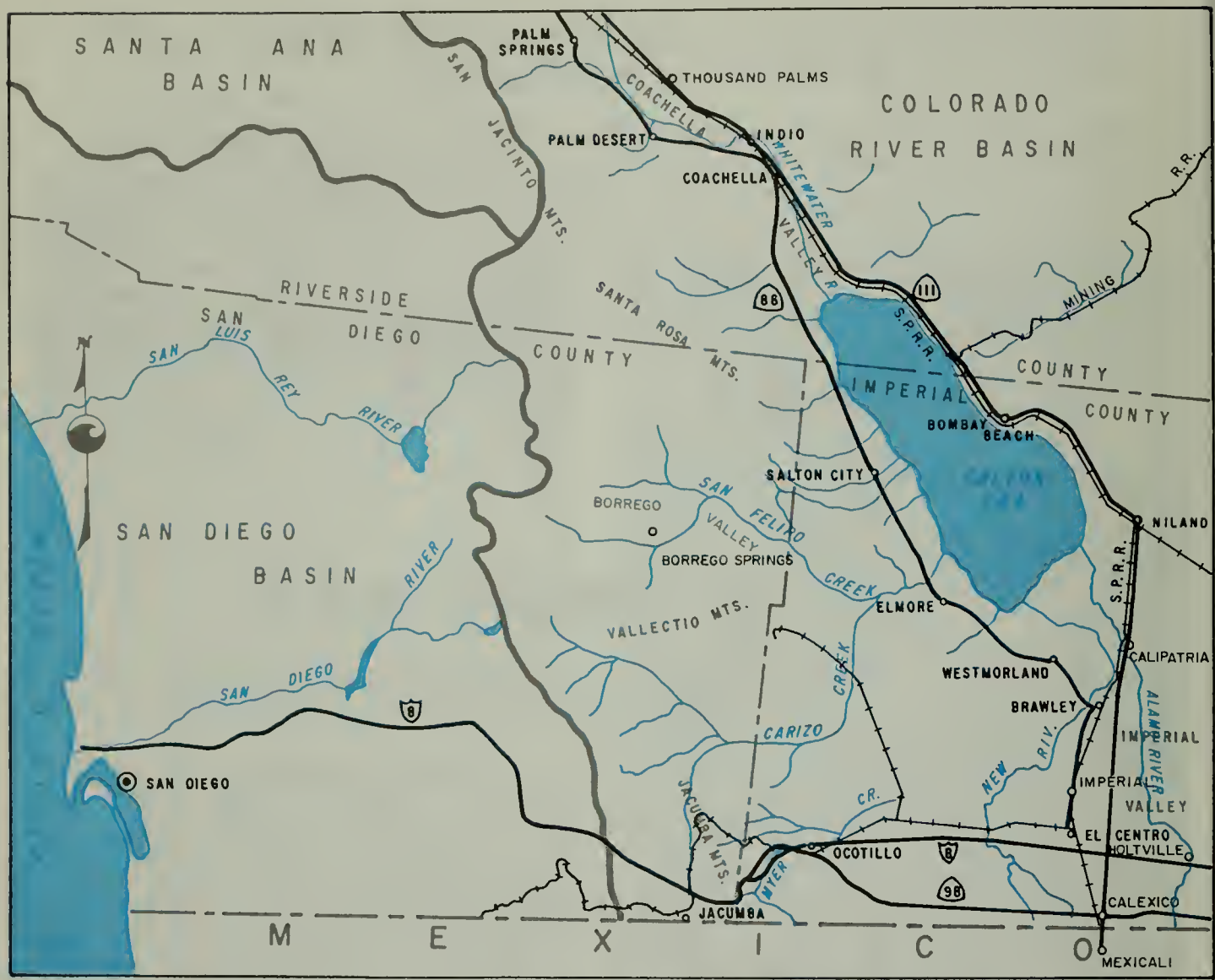
In the 1975-76 issue of this report, the text stated ". . . and then came September and Kathleen". As if for the sake of continuity, 1976-77 brought "August and Doreen".

The first effects of Tropical Storm Doreen were felt in Southern California's Imperial Valley early Monday afternoon, August 15, 1977. By 5:00 p.m., Calexico, near the Mexican Border, had recorded 68 millimetres (2.66 inches) of rain; by 9:00 a.m., Tuesday, Brawley -- about 40 kilometres (25 miles) to the north -- had recorded 95 millimetres (3.73 inches). The storm swept north and east through the rich Imperial and Coachella Valleys and across the desert areas, leaving in its wake vast acres of inundated farmland, flooded homes, washed-out roadways and railways, and three fatalities.

Major washout on I-8

DEBRIS OBLITERATES I-8 NEAR OLD MEYER BRIDGE
IMPERIAL COUNTY

FIGURE 15. SOUTHERN CALIFORNIA REFERENCE MAP
FOR AUGUST 1977 DOREEN STORM DAMAGE



September 1, 1977

Heavy Rains End, Damage To Area Placed In Millions

IMPERIAL COUNTY

IMPERIAL COUNTY sustained the greatest damage from Doreen and was declared a Disaster Area on August 23 by Governor Brown.

Initial damage estimates were set at $20 million, but were later reassessed at $28 million to $29 million. These estimates included $15 million damage to crops, $2.2 million damage to county roads, and $4.5 million damage to private homes. Among the communities hardest hit by flooding were Calexico, Imperial, Brawley, El Centro, Calipatria, Holtville, and Westmoreland. An estimated 300 homes sustained flood damage.

One of the more fortunate communities in the county was Ocotillo which was nearly devastated by the previous year's Kathleen, but escaped Doreen almost unscathed. The apparent reason for this fortunate circumstance was that Doreen produced its major rainfall over the valley area, whereas Kathleen had dumped its major rainfall over the mountains which then produced flash floods which raced down the creekbeds and desert washes.

STORM-TOTAL RAINFALL COMPARISONS

	Precipitation in millimetres	Precipitation in inches
	Doreen (1977)	
El Centro	91.95	3.62
Brawley	122.94	4.84
Calipatria	98.23	3.08
Imperial	91.69	3.61
Holtville	56.13	2.21
	Kathleen (1976)	
El Centro	40.64	1.65
Brawley	60.20	2.37
Calipatria	29.21	1.15
Imperial	59.69	2.35
Holtville	62.74	2.47

Although the runoff produced by Doreen was not spectacular the valley-type rainfall reportedly inundated even more valley farmland and caused more residential flooding than did Kathleen.

Washouts and flooding closed interstate 8 (El Centro to San Diego), State Route 86 (Brawley to Indio), threatened State Route 111 (along the east side of the Salton Sea), and closed 25 major county roads. The Southern Pacific's main east-west line was closed by a washout near Niland.

SAN DIEGO COUNTY sustained its major damage in Borrego Valley, located in the northeast portion of the County. An estimated $1.7 million worth of damage was caused in the Borrego Springs area, where mud and water damaged about 60 homes (of the $100,000- to $200,000 class), landscaping, the golf course, and roads in the DeAnza Desert Country Club. The Henderson Canyon check-dam system, designed to protect the country club area, was no match for the torrential rains, and six of the seven basin dikes were washed out. On August 23, the County Board of Supervisors declared the existence of a local emergency.

RIVERSIDE COUNTY also experienced considerable local flooding in the Coachella Valley area during the passage of Doreen. Business and residential flooding were most prevalent in the communities of Indio, Palm Desert, Thousand Palms, and Desert Hot Springs. About 22,000 sand bags were reportedly distributed from Palm Springs to Indio at local fire stations. Agricultural damage was not extensive, but reportedly some vegetable crops required replanting. No emergency was declared in the county.

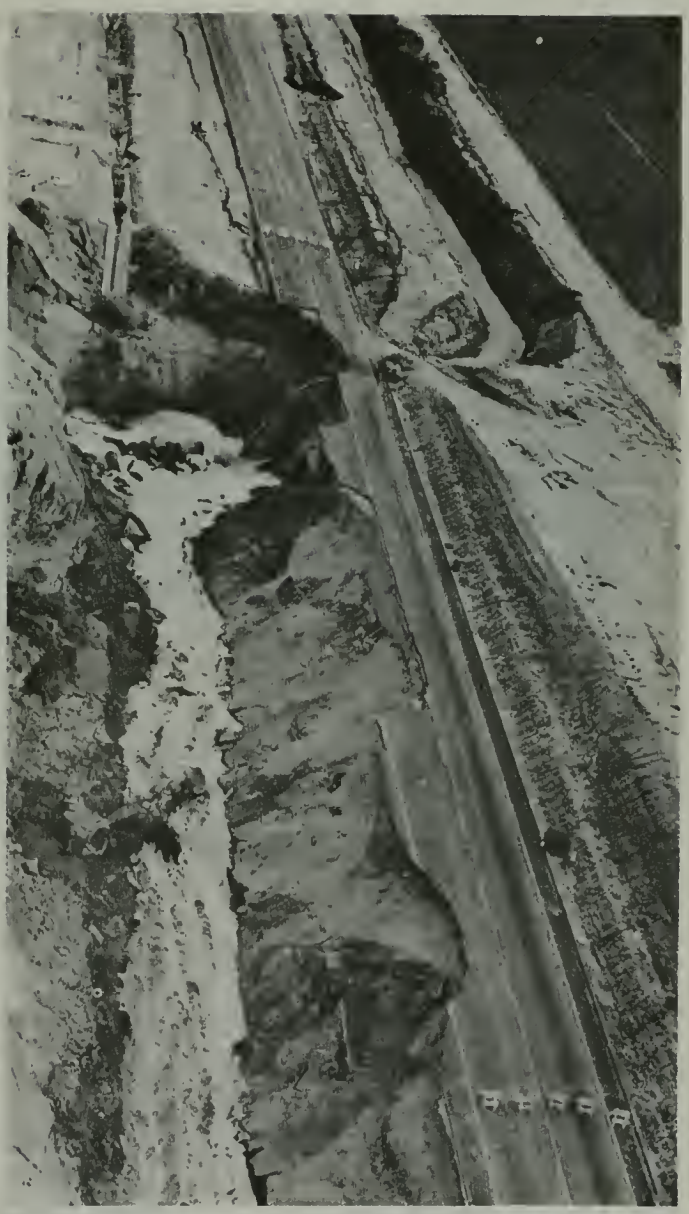
SAN BERNARDINO COUNTY experienced a variety of events (brought about by Doreen) ranging from near-drownings to home-floodings, to a rash of auto accidents, and to a line-up of an estimated 5,000 vehicles on I-15 between Barstow and Baker when an avalanche of rock and mud washed out a one-mile stretch of the primary route from Los Angeles to Las Vegas.

- - - - - - - - - - - - - - - -

Although only Imperial County obtained a Governor's Declaration of Emergency, and no Presidential declarations were made, the federal Small Business Administration declared San Diego and Imperial Counties--and "adjacent counties"--eligible for low-interest SBA loans.

The water year was capped off by a late September storm over Northern California that produced considerable local flooding in Redding in the Upper Sacramento Valley. Shasta Dam reported 82 millimetres (3.24 inches) of rain, while Happy Camp in the Trinity River drainage reported over 102 millimetres (4 inches). The lake level behind Shasta Dam rose 33 millimetres (1.29 inches) during the storm. Although, this was only a minuscule rise after 2 years of drought every drop was appreciated.

WATER LINE SHOWS AT COUNTRY CLUB
EL CENTRO AUGUST 17, 1977



ROAD DAMAGE IN IMPERIAL COUNTY

FIGURE 16. NORTHERN CALIFORNIA REFERENCE MAP FOR HYDROGRAPHS, FIGURES 17-22

FIGURE 17. HYDROGRAPHS OF SHASTA LAKE AND SACRAMENTO RIVER

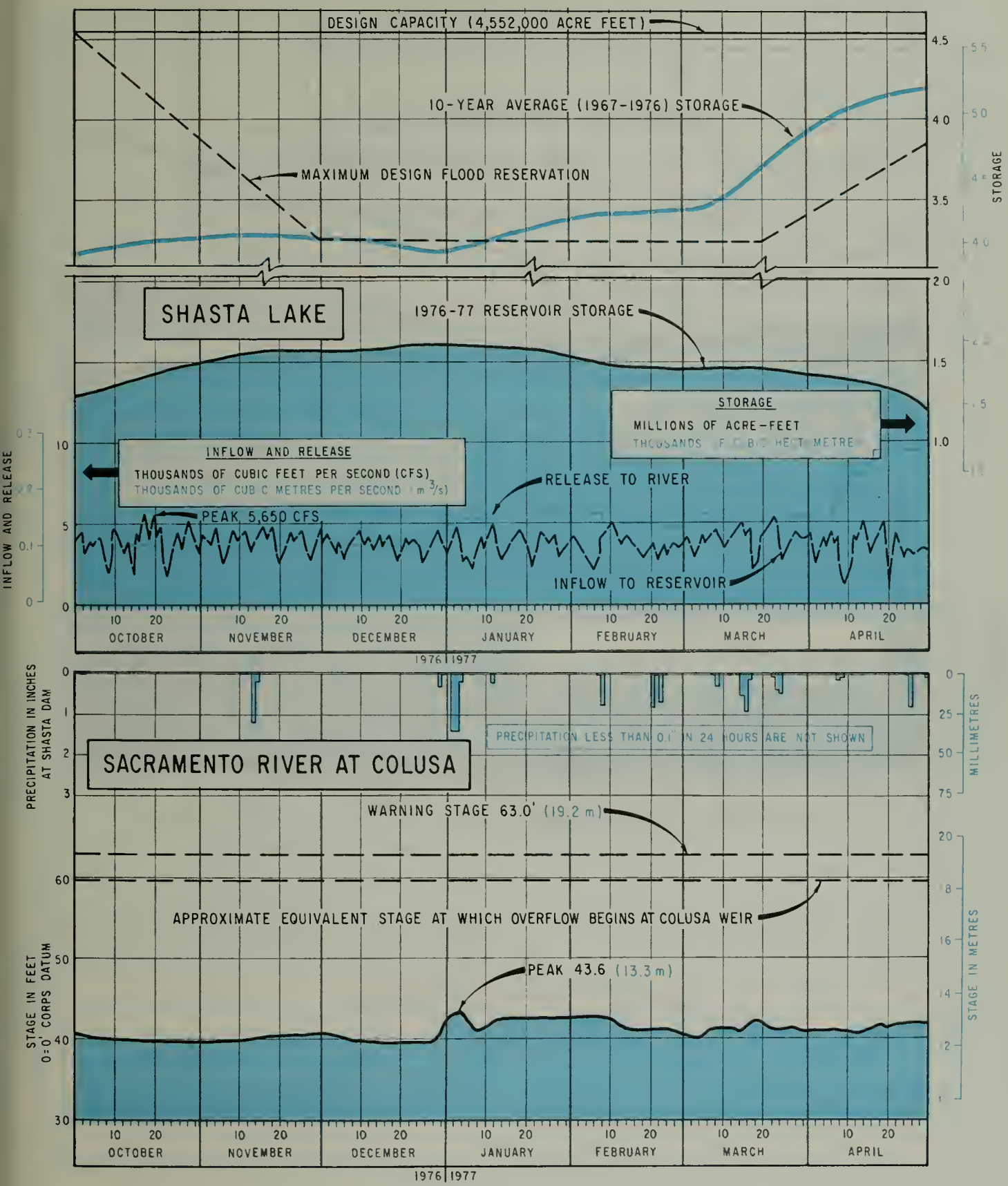


FIGURE 18. HYDROGRAPH OF LAKE OROVILLE

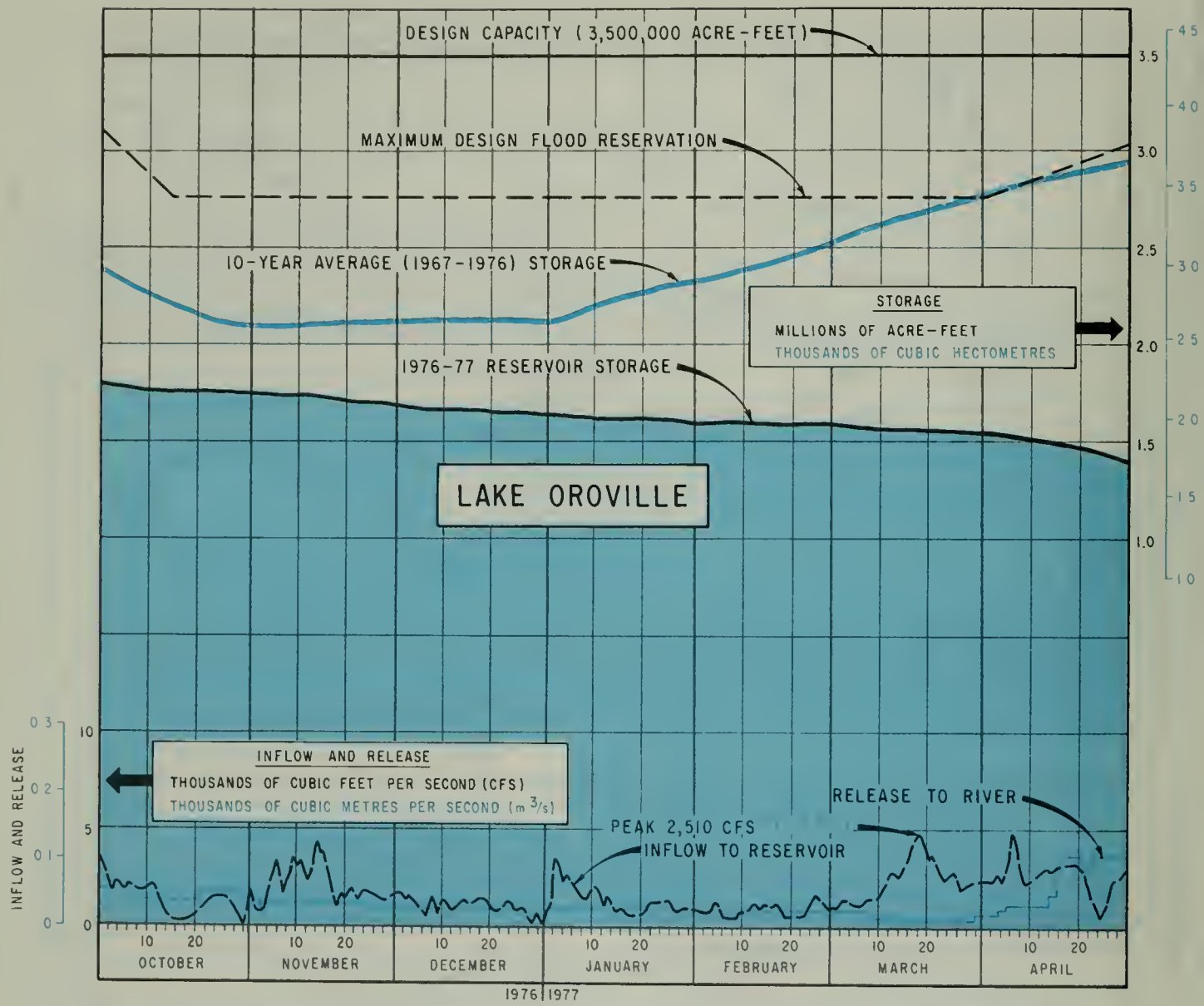
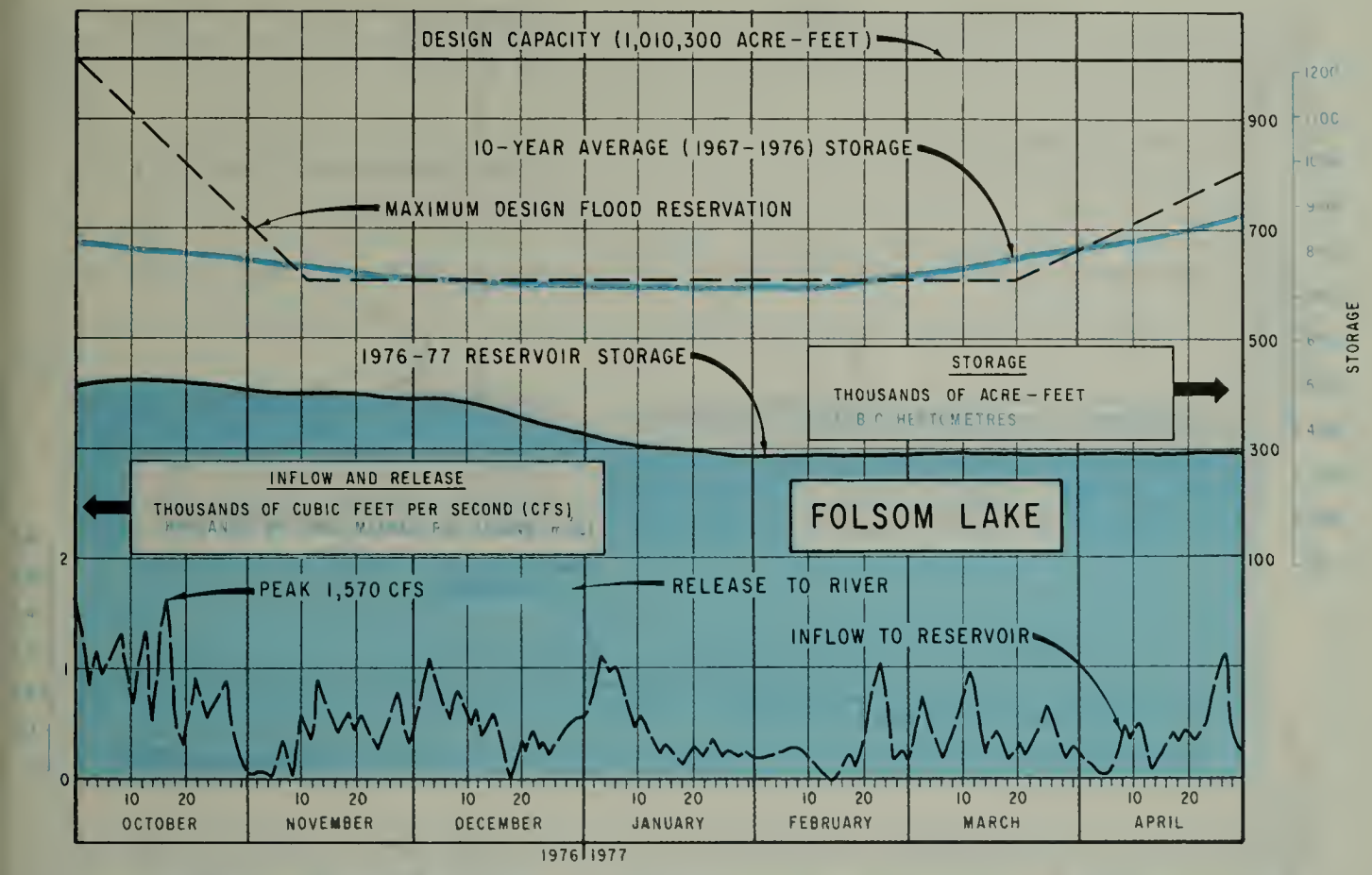


FIGURE 19. HYDROGRAPHS OF FOLSOM LAKE, AND SACRAMENTO RIVER



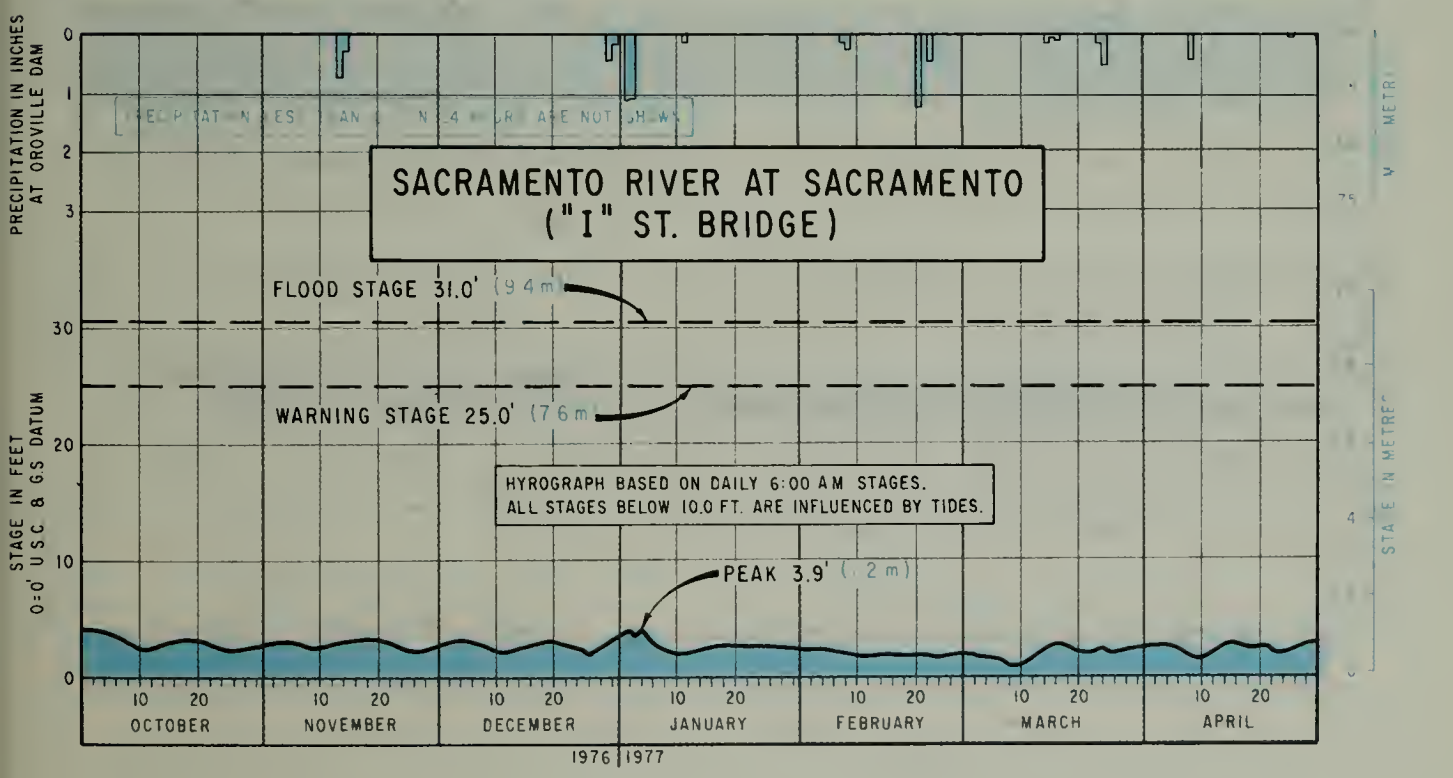


FIGURE 20. HYDROGRAPHS OF SMITH RIVER, TRINITY AND KLAMATH RIVERS

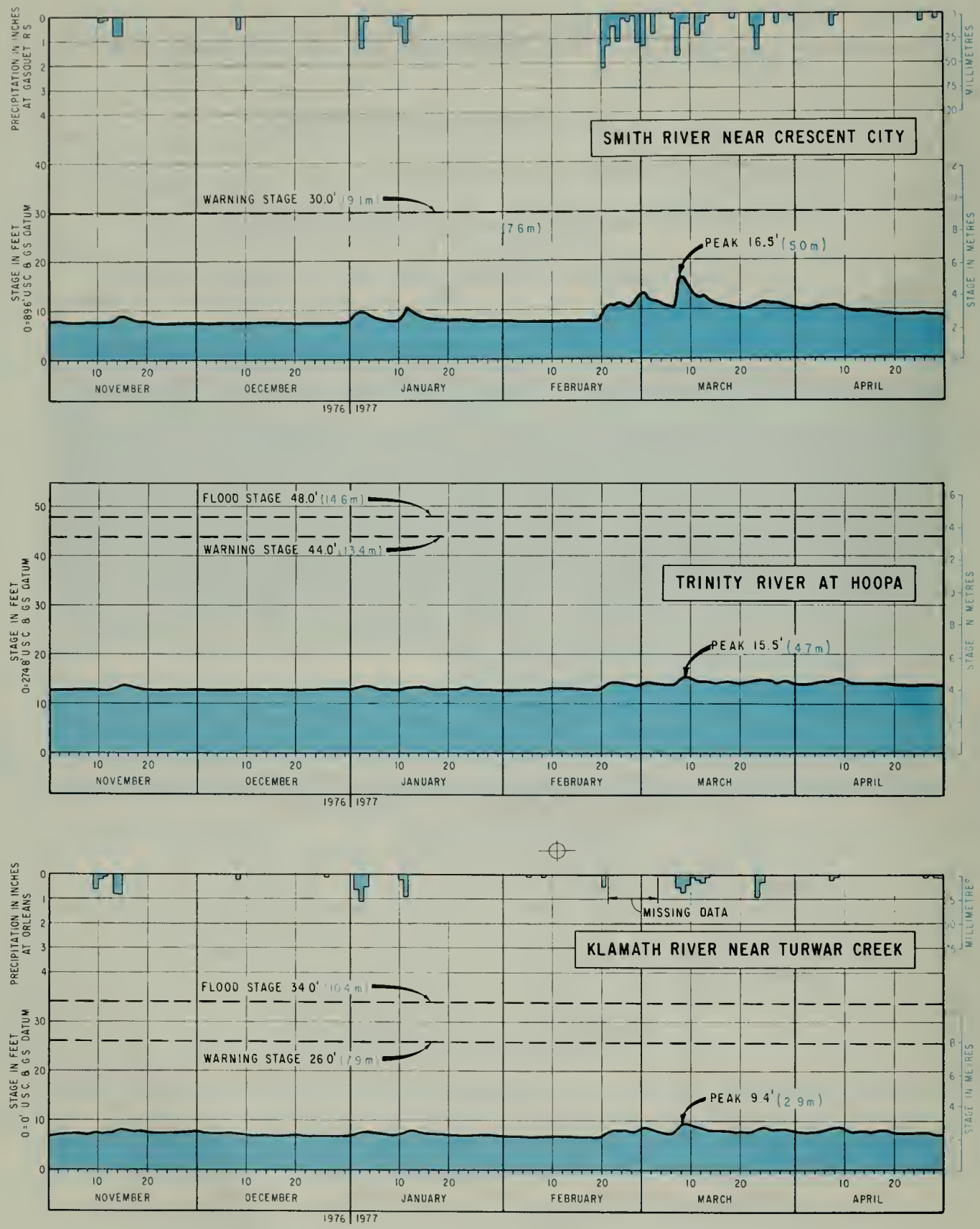
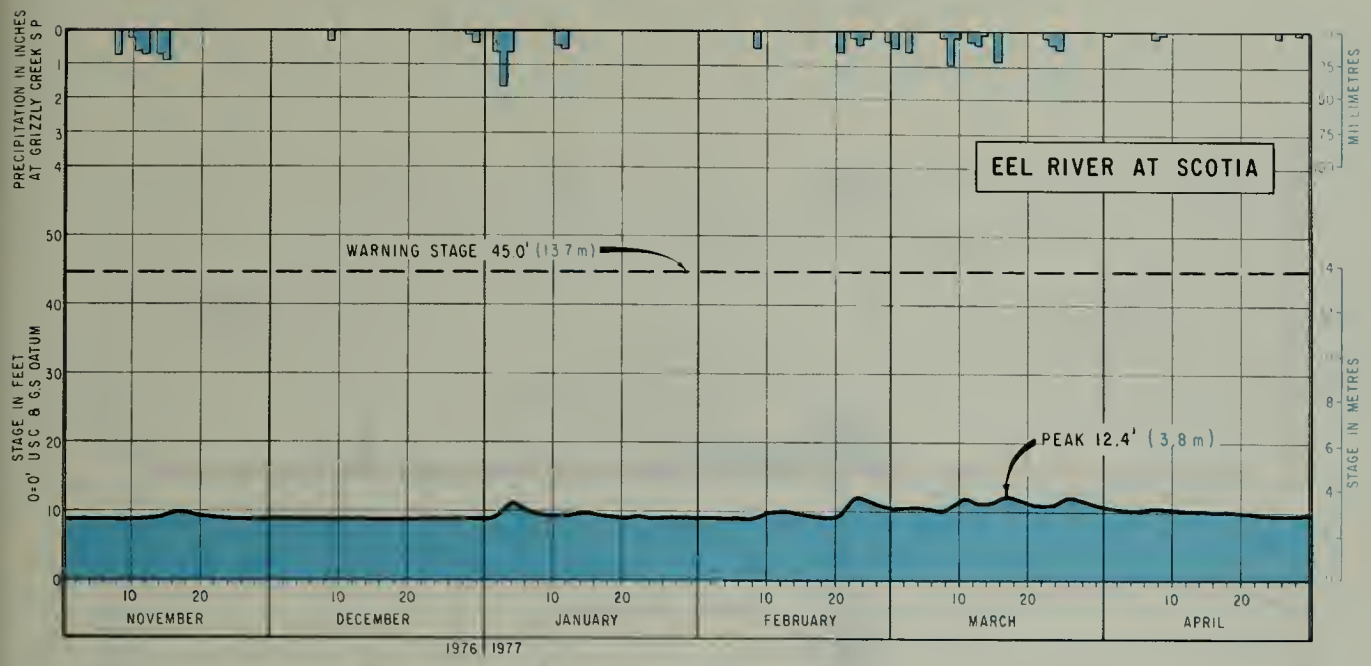


FIGURE 21. HYDROGRAPHS OF EEL AND RUSSIAN RIVERS



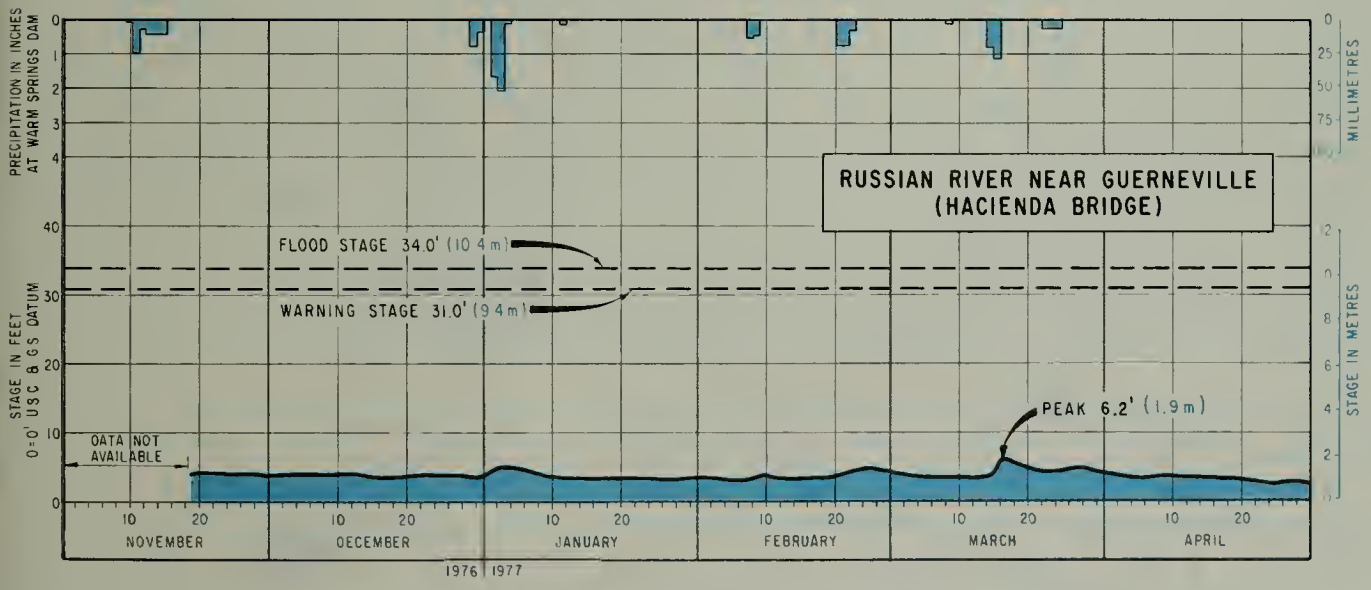
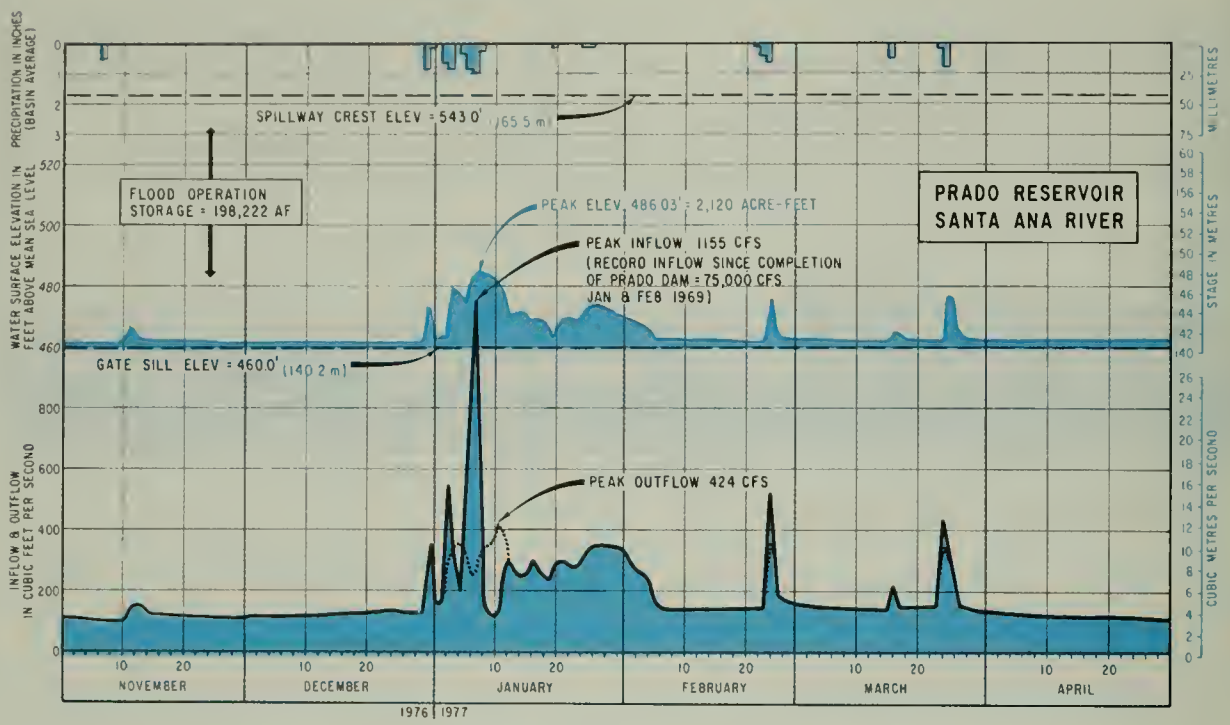


FIGURE 22. FLOOD CONTROL OPERATION OF PRADO DAM AND RESERVOIR

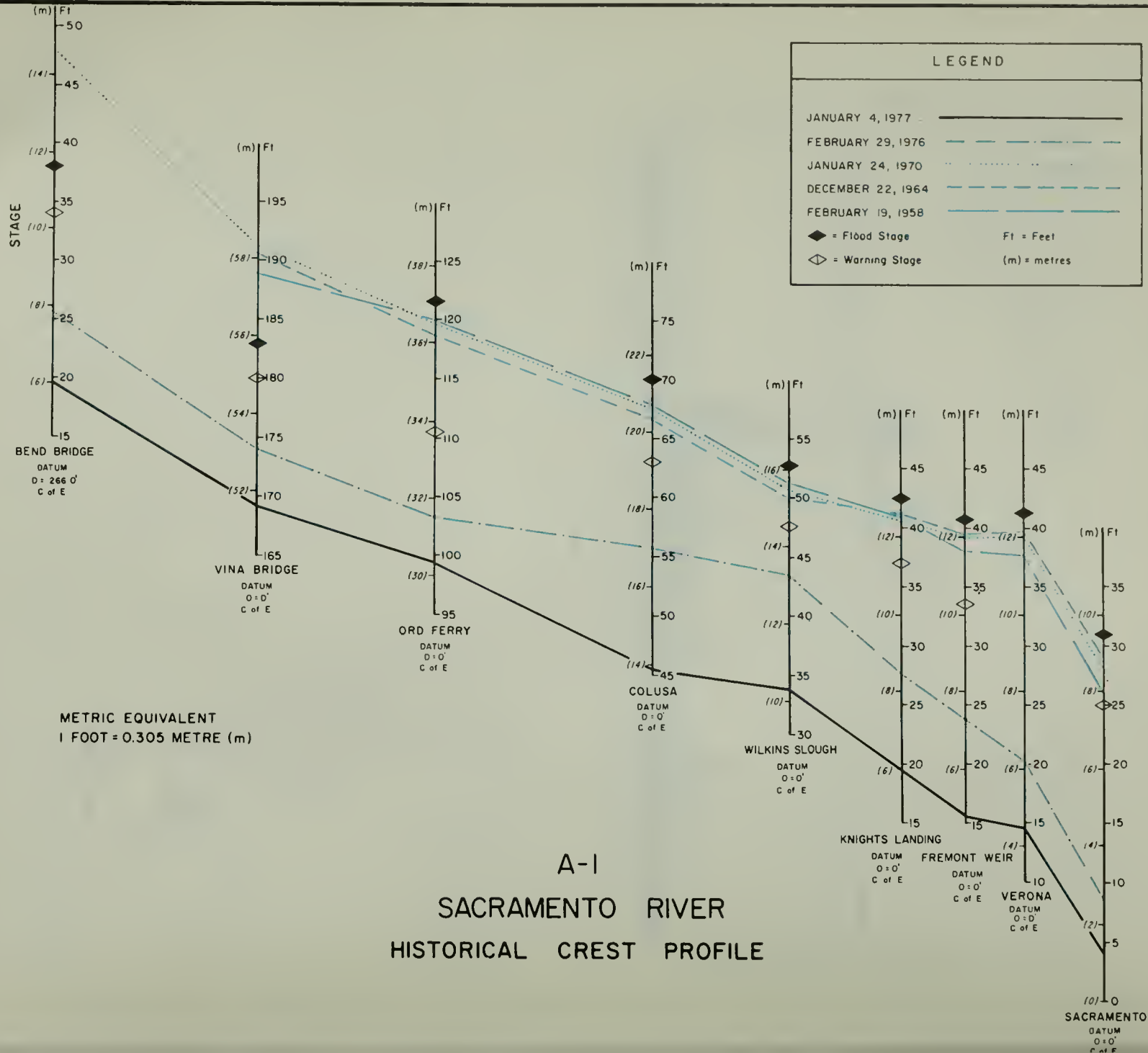


SITE LOCATION MAP

VICINITY MAP

APPENDIX A

Sacramento River Crest
and
Weir Overflow Records

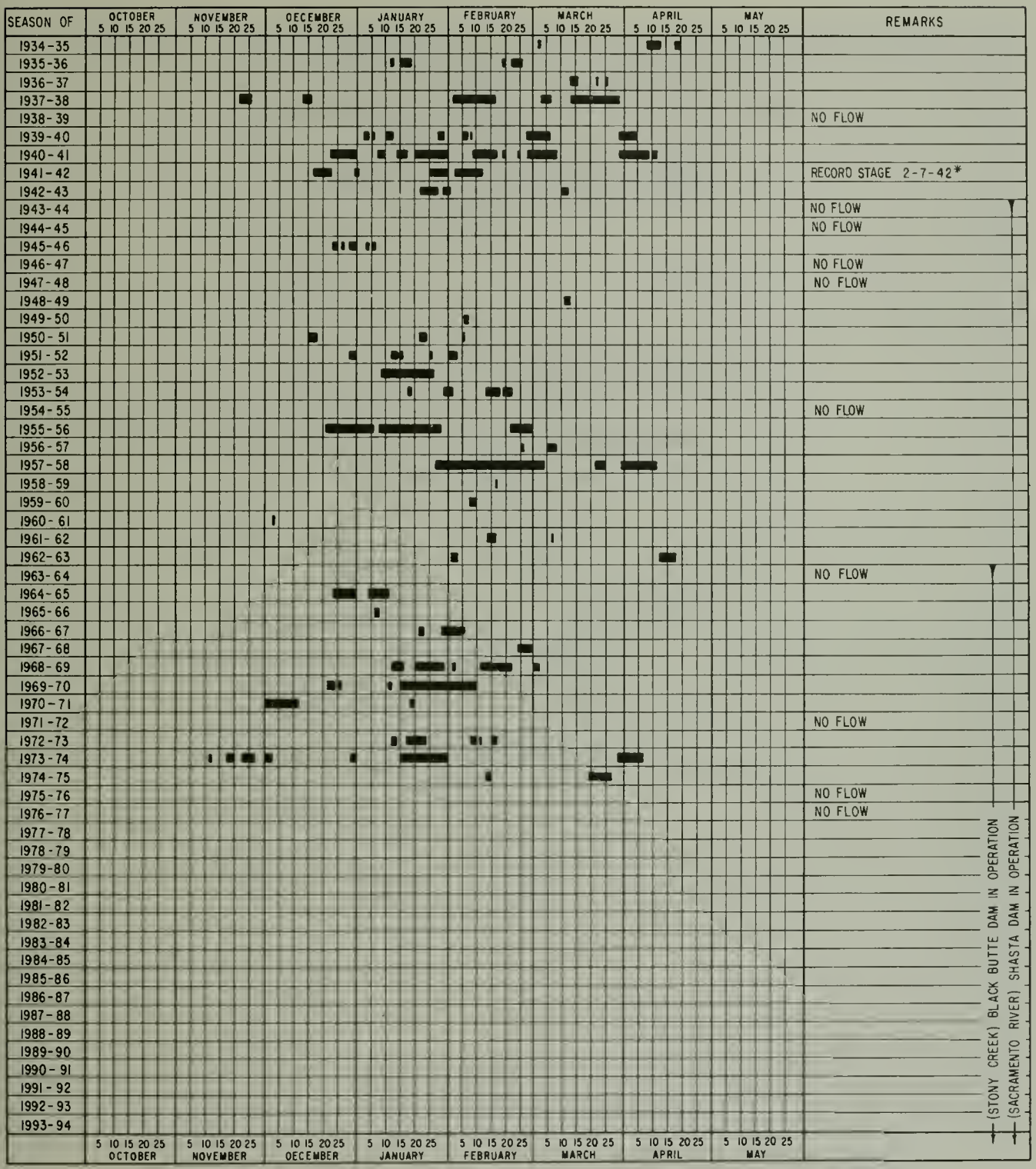


A-1

SACRAMENTO RIVER

HISTORICAL CREST PROFILE

A-2, PERIOD OF RECORD OF OVERFLOW OF THE MOULTON WEIR



NOTE:

Data compiled from records of D.W.R. stream gaging station "Sacramento River at Moulton Weir"

Datum: 0 = 0' U.S.E.D.

Period of record: 1935 to present

Crest elevation = 76.75 feet (23.41 metres)

Metric Equivalent:

1 FOOT = 0.305 METRES

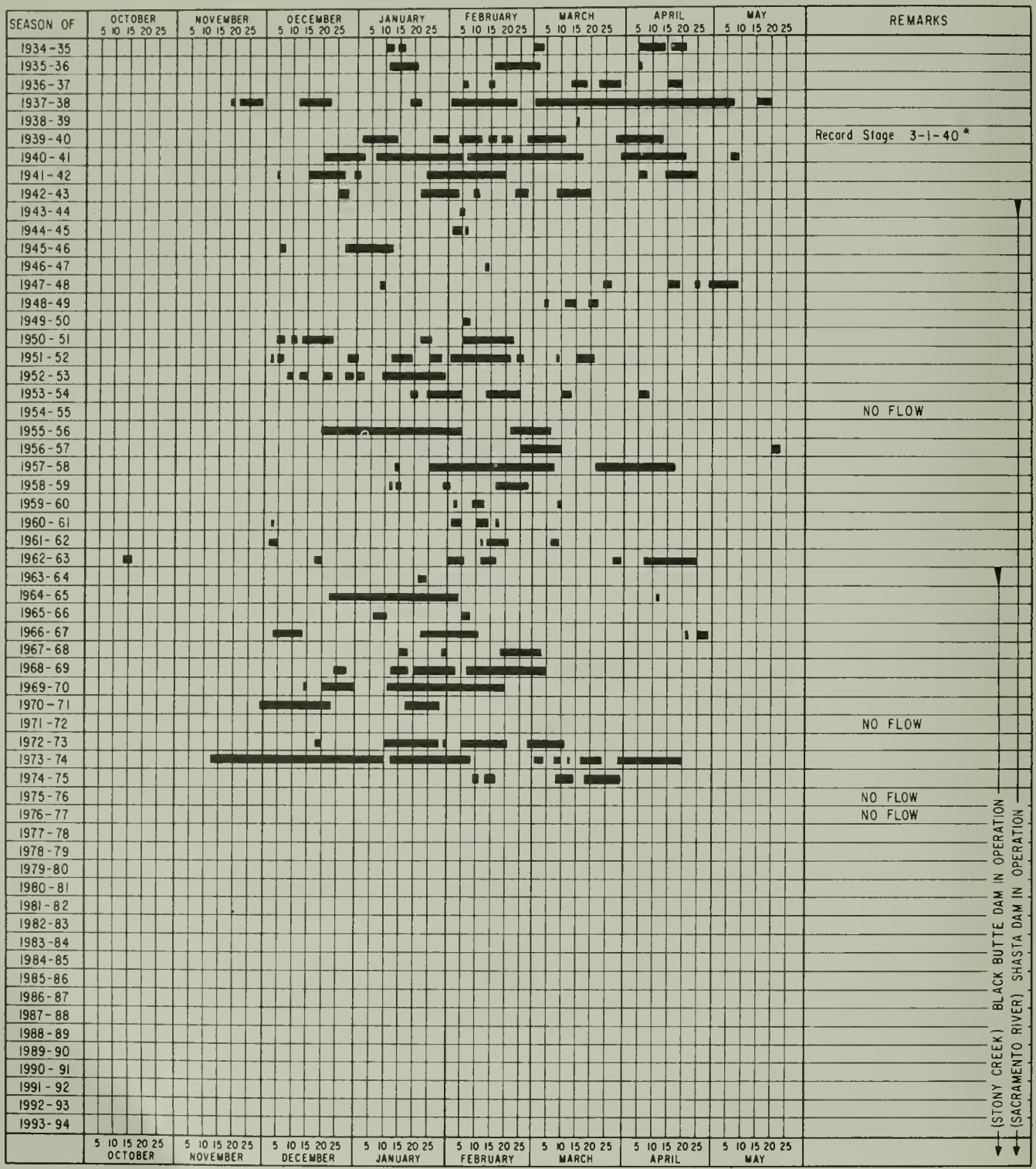
LEGEND

Designates periods of flow over weir

* 83.8 feet
(25.6 metres)

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

A-3, PERIOD OF RECORD OF OVERFLOW OF THE COLUSA WEIR



NOTE:

Data compiled from records of D.W.R. stream gaging station Sacramento River at Colusa Weir

Datum: 0 = 0' U.S.E.D.

Period of record: 1935 to present

Crest elevation 61.80 feet (18.85 metres)

Metric Equivalent:
1 FOOT = 0.305 METRES

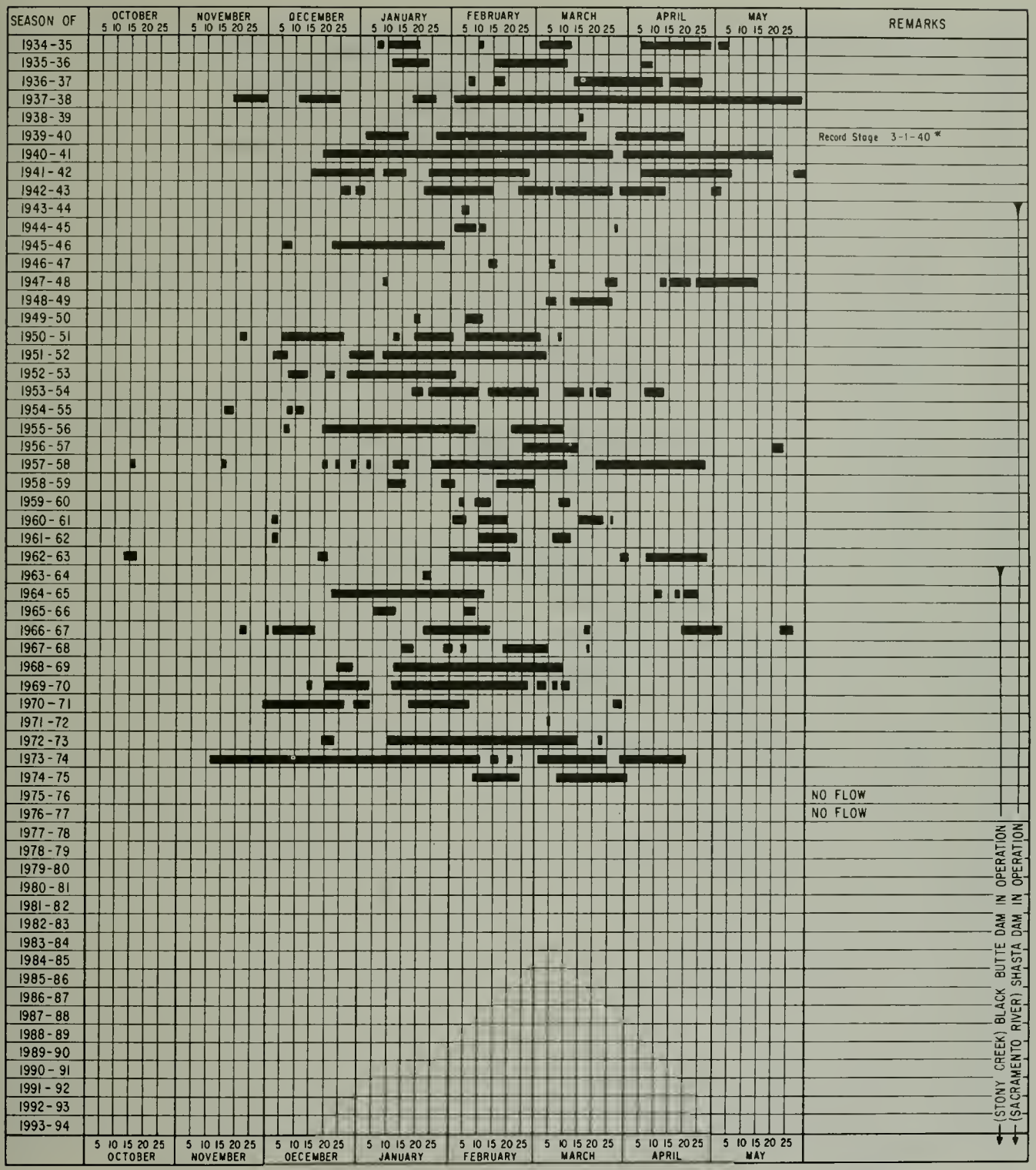
LEGEND

Designates periods of flow over weir

* 70.6 feet
(21.5 metres)

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

A-4, PERIOD OF RECORD OF OVERFLOW OF THE TISDALE WEIR



NOTE:

Data compiled from records of D.W.R. stream gaging station "Sacramento River at Tisdale Weir"
Datum 0=0' U.S.E.D.
Period of record: 1935 to present
Crest elevation = 45.45 feet (13.86 metres)

Metric Equivalent:
1 FOOT = 0.305 METRES

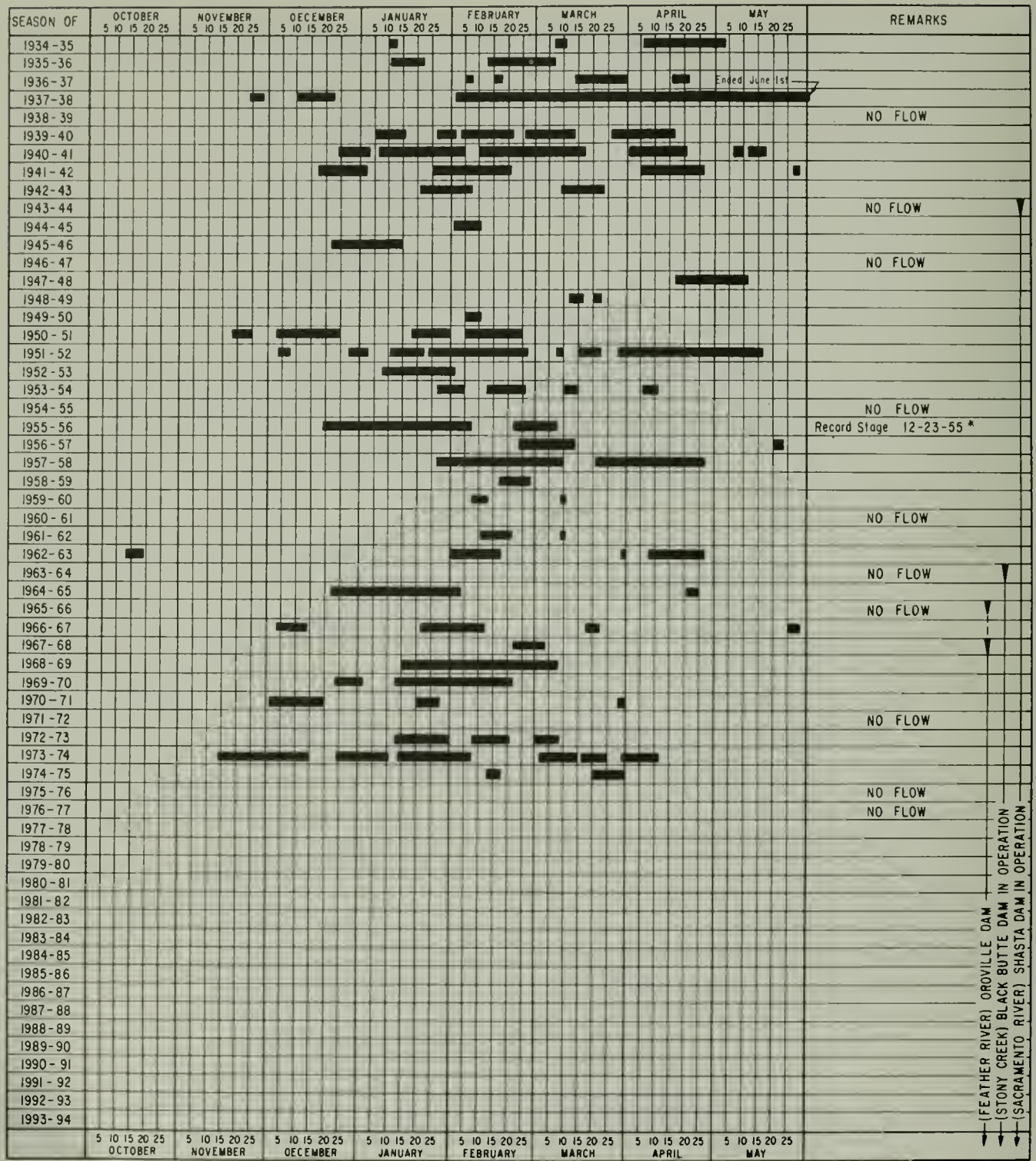
LEGEND

Designates periods of flow over weir

*53.3 feet
(16.3 metres)

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

A-5, PERIOD OF RECORD OF OVERFLOW OF THE FREMONT WEIR



NOTE:

Data compiled from records of D.W.R stream gaging station "Sacramento River at Freemont Weir, West End"

Datum: 0 = 0' U.S.E.D.

Period of record: 1934 to present

Crest elevation = 33.50 feet (10.22 metres)

Metric Equivalent:
1 FOOT = 0.305 METRES

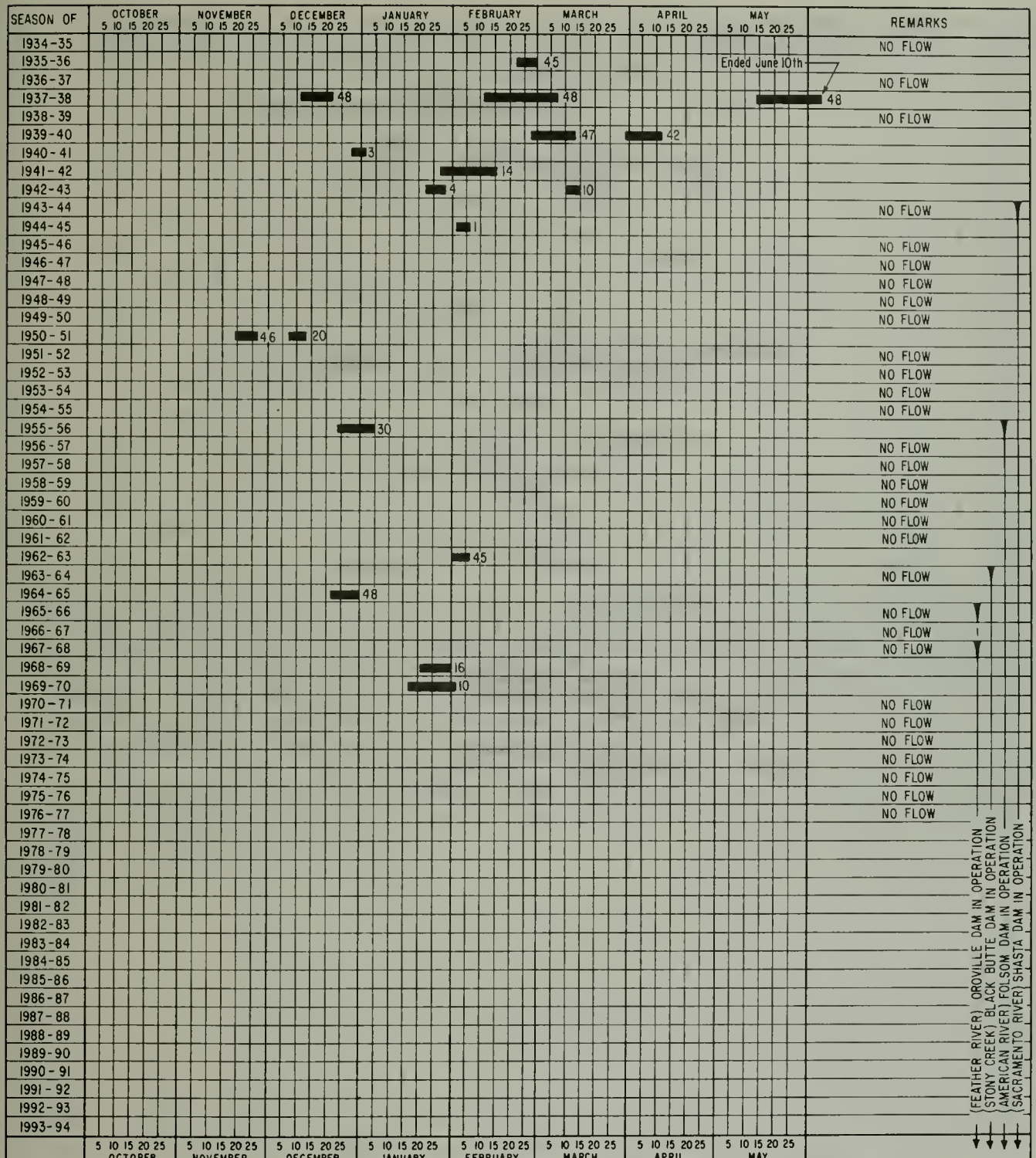
LEGEND

Designates periods of flow over weir

* 39.7 feet
(12.1 metres)

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

A-6, PERIOD OF RECORD OF OVERFLOW OF THE SACRAMENTO WEIR



NOTE:

Data compiled from records of D.W.R. stream gaging station "Sacramento Weir Spill to Yolo Bypass, near Sacramento

Datum: 0=0' U.S.E.D

Period of record: 1926 to present

Crest elevation = 24.75 feet (7.55 metres)

Elevation of top of gates = 31.0 feet (9.46 metres)

Metric Equivalent:

1 FOOT = 0.305 METRES

LEGEND

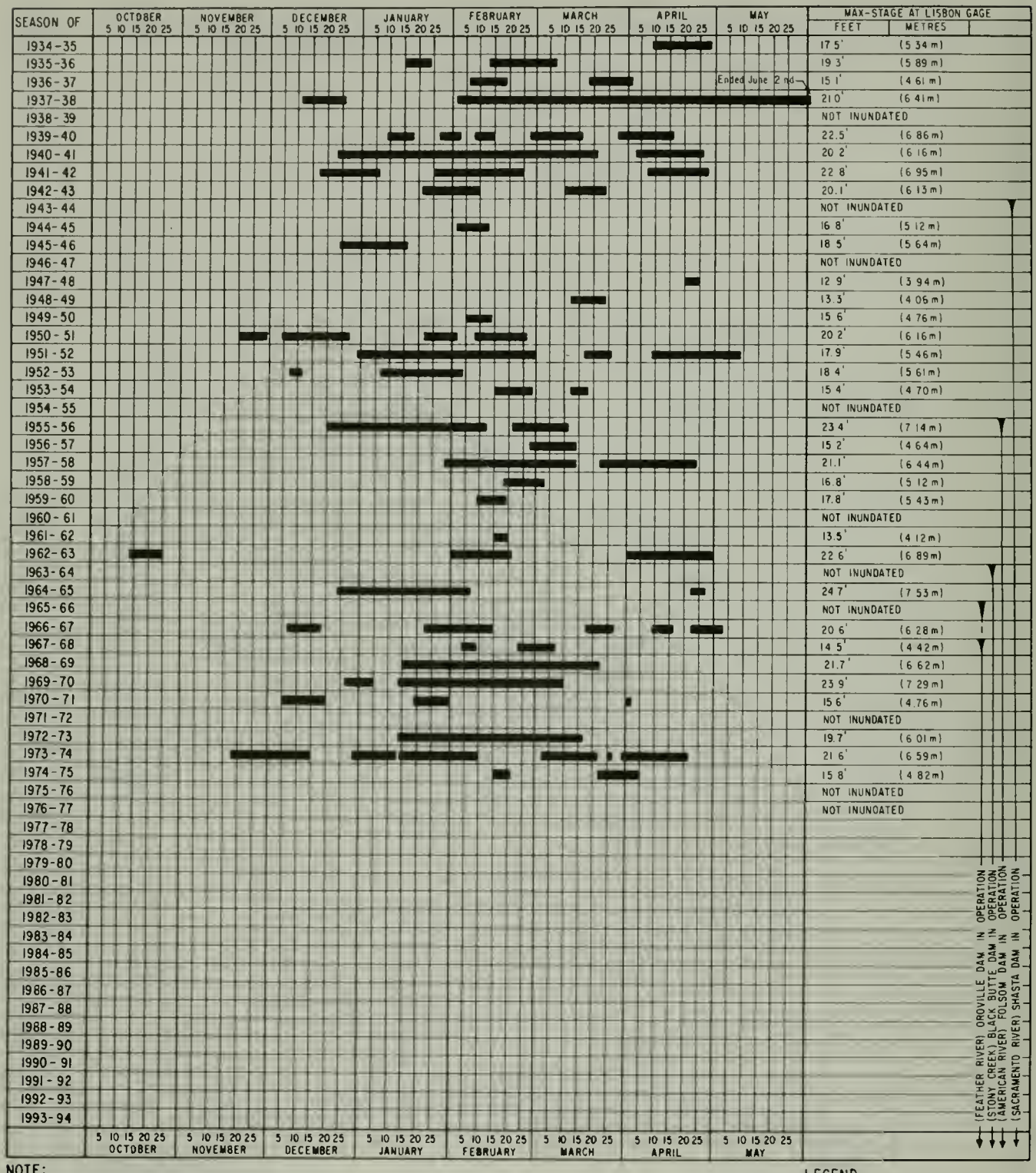
5 — Designates periods of flow over weir and total number of gates opened.

STATE OF CALIFORNIA

THE RESOURCES AGENCY

DEPARTMENT OF WATER RESOURCES

A-7, PERIOD OF RECORD OF INUNDATION OF THE YOLO BYPASS



NOTE:

Data compiled from records of DWR stream gaging station "Yolo Bypass near Lisbon."

Datum: 0=U.S.E.D. Datum

Period of Record: 1914 to Present

Assumed overflow of Bypass at stage above 11.5' (3.51 metres) on the Lisbon gage.

Metric Equivalent:
1 FOOT = 0.305 METRES

LEGEND

Designates period of inundation of Bypass

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

APPENDIX B

Peak Flows and Stages at Selected Streams and Stations in California

INTRODUCTION

Appendix B presents data for selected stations on representative streams of the major hydrogrologic basins of California (Figure 2). Historic data are obtained from USGS Surface Water Records, Department of Water Resources' Bulletin 130, and U. S. Department of Commerce, NOAA, National Weather Service, Daily River Stage publications. Current water year data, obtained from USGS and DWR, are preliminary and are subject to revision.

Stations are listed in a downstream direction along the main stream and tributaries. Stations on tributaries are listed between main stream stations in the order in which the tributaries enter the main stream.

LEGEND FOLLOWS TABLES

PEAK FLOW AND STAGES (ENGLISH UNITS)

STREAM AND STATION	DRAINAGE AREA IN SQ MILES	PERIOD OF RECORD	SOURCE OF RECORD	PREVIOUS MAXIMUM OF RECORD			1976-1977 WATER YEAR		
				DATE	STAGE IN FEET	DISCHARGE IN CFS	DATE	STAGE IN FEET	DISCHARGE IN CFS
NORTH COASTAL AREA									
SMITH RIVER BASIN									
SMITH RIVER NEAR CRESCENT CITY	609	1931-	USGS	12-22-64	48.5	228,000	9-28-77	17.77	15800
KLAMATH RIVER BASIN									
SHASTA RIVER NEAR YREKA	793	1933-41 1944-	USGS	12-22-64 12-22-64	12.9 13.9(A)	21,500 - -	11-15-76	3.60	250
SCOTT RIVER NEAR FORT JONES	653	1941-	USGS	12-22-64	25.3(AC)	54,600	6-10-77	6.05	300
KLAMATH RIVER NEAR SEIAD VALLEY	6980	1912-25 1951-	USGS	12-23-64	33.8(A)	165,000	11-15-76	5.71	3650
SALMON RIVER AT SOMESBAR	751	1911-15 1927-	USGS	12-22-64	46.6(A)	133,000	9-29-77	5.23	1800
KLAMATH RIVER AT ORLEANS	8075	1927-	USGS	12-22-64	76.5(AC)	307,000	9-29-77	5.12	7800
TRINITY RIVER ABOVE COFFEE CREEK NEAR TRINITY CENTER	149	1957-	USGS	12-22-64 12-22-64	12.3 13.4(A)	20,800 - -	9-28-77	3.07	550
TRINITY RIVER AT LEWISTON	728	1911-	USGS	12-22-55	27.3(AC)	71,600	11-15-76	3.47	250
NORTH FORK TRINITY RIVER AT HELENA	151	1911-13 1957-	USGS-DWR	12-22-64	27.9(A)	35,800	9-28-77	8.19	750
TRINITY RIVER NEAR BURNT RANCH	1439	1931-40 1956-	USGS	12-22-55	43.2(A)	172,000	9-28-77	5.44	1700
TRINITY RIVER AT HOOPA	2965	1911-14 1916-18 1931-	USGS	12-22-64	40.3(AC)	231,000	3 -9-77	15.59	2700
KLAMATH RIVER NEAR KLAMATH	12100	1910-26 1950-	USGS	12-23-64	55.3(A)	557,000	9-29-77	10.50	15200
REDWOOD CREEK BASIN									
REDWOOD CREEK AT ORICK	278	1911-13 1953-	USGS	12-22-64	24.0(A)	50,500	3 -9-77	9.12	3300
LITTLE RIVER BASIN									
LITTLE RIVER NEAR TRINIDAD	44	1955-	USGS	1-22-72 1-17-53	14.08 15.7(A)	9,720 - -	3 -9-77	3.77	700
MAD RIVER BASIN									
MAD RIVER NEAR FOREST GLEN	143	1953-	USGS	12-22-55	24.5(A)	39,200	5 -3-77	3.37	150
MAD RIVER NEAR ARCATA	485	1910-13 1950-	USGS	12-22-55	29.8	77,800	3 -9-77	7.92	3350
EEL RIVER BASIN									
EEL RIVER BELOW SCOTT DAM NEAR POTTER VALLEY	290	1922-	USGS	12-22-64	24.2(A)	56,300	11-24-76	4.67	300
EEL RIVER AT VAN ARSDALE DAM NEAR POTTER VALLEY	349	1909-	USGS	12-22-64	33.9(A)	64,100	10 -7-76	8.43	400
OUTLET CREEK NEAR LONGVALE	161	1956-	USGS	12-22-64	30.6(A)	77,900	3 -9-77	4.69	1050
NORTH FORK EEL RIVER NEAR MINA	248	1953-	USGS	12-22-64	33.6(A)	133,000	STATION DISCONTINUED		

PEAK FLOW AND STAGES (METRIC UNITS)

STREAM AND STATION	DRAINAGE AREA IN SQ KM	PERIOD OF RECORD	SOURCE OF RECORD	PREVIOUS MAXIMUM OF RECORD			1976-1977 WATER YEAR		
				DATE	STAGE IN METRES	DISCHARGE IN M /S	DATE	STAGE IN METRES	DISCHARGE IN M /S
NORTH COASTAL AREA									
SMITH RIVER BASIN									
SMITH RIVER NEAR CRESCENT CITY	1577	1931-	USGS	12-22-64	14.8	6,060	9-28-77	5.42	847
KLAMATH RIVER BASIN									
SHASTA RIVER NEAR YREKA	2053	1933-41 1944-	USGS	12-22-64 12-22-64	3.9 4.2(A)	608 - -	11-15-76	1.10	6.8
SCOTT RIVER NEAR FORT JONES	1691	1941-	USGS	12-22-64	7.7(AC)	1,550	6-10-77	1.88	8.2
KLAMATH RIVER NEAR SEIAD VALLEY	1807R	1912-25 1951-	USGS	12-23-64	10.3(A)	4,670	11-15-76	1.78	102
SALMON RIVER AT SOMESBAR	1945	1911-15 1927-	USGS	12-22-64	14.2(A)	3,770	9-29-77	1.59	51
KLAMATH RIVER AT ORLEANS	21950	1927-	USGS	12-22-64	23.3(AC)	8,690	9-29-77	1.56	220
TRINITY RIVER ABOVE COFFEE CREEK, NEAR TRINITY CENTER	385	1957-	USGS	12-22-64 12-22-64	3.7 4.1(A)	588 - -	9-28-77	0.98	15
TRINITY RIVER AT LEWISTON	1885	1911-	USGS	12-22-55	8.3(AC)	2,030	11-15-76	1.06	7.6
NORTH FORK TRINITY RIVER AT HELENA	391	1911-13 1957-	USGS-DWR	12-22-64	8.5(A)	1,010	9-28-77	2.50	21
TRINITY RIVER NEAR BURNT RANCH	3726	1931-40 1956-	USGS	12-22-55	13.2(A)	4,870	9-28-77	1.66	88
TRINITY RIVER AT HOOPA	7420	1911-14 1916-18 1931-	USGS	12-22-64	12.3(AC)	6,540	3 -9-77	4.75	76
KLAMATH RIVER NEAR KLAMATH	31339	1910-26 1950-	USGS	12-23-64	16.9(A)	15,800	9-29-77	3.20	430
REDWOOD CREEK BASIN									
REDWOOD CREEK AT ORICK	720	1911-13 1953-	USGS	12-22-64	7.3(A)	1,430	3 -9-77	2.78	93
LITTLE RIVER BASIN									
LITTLE RIVER NEAR TRINIDAD	113	1955-	USGS	1-22-72 1-17-53	4.3R 4.8(A)	275 - -	3 -9-77	1.15	19
MAD RIVER BASIN									
MAD RIVER NEAR FOREST GLEN	370	1953-	USGS	12-22-55	7.5(A)	1,110	5 -3-77	1.03	3.5
MAD RIVER NEAR ARCATA	1256	1910-13 1950-	USGS	12-22-55	9.1	2,200	3 -9-77	2.41	95
EEL RIVER BASIN									
EEL RIVER BELOW SCOTT DAM NEAR POTTER VALLEY	751	1922-	USGS	12-22-64	7.8(A)	1,590	11-24-76	1.42	8.7
EEL RIVER AT VAN ARSDALE DAM NEAR POTTER VALLEY	903	1909-	USGS	12-22-64	10.3(A)	1,820	10 -7-76	2.57	11
OUTLET CREEK NEAR LONGVALE	416	1956-	USGS	12-22-64	9.3(A)	2,210	3 -9-77	1.43	29
NORTH FORK EEL RIVER NEAR MINA	642	1953-	USGS	12-22-64	10.2(A)	3,770	STATION DISCONTINUED		

STREAM AND STATION	DRAINAGE AREA IN SQ MILES	PERIOD OF RECORD	SOURCE OF RECORD	PREVIOUS MAXIMUM OF RECORD DATE	PREVIOUS MAXIMUM OF RECORD STAGE IN FEET	PREVIOUS MAXIMUM OF RECORD DISCHARGE IN CFS	1976-1977 WATER YEAR DATE	1976-1977 WATER YEAR STAGE IN FEET	1976-1977 WATER YEAR DISCHARGE IN CFS
NORTH COASTAL AREA (CONTINUED)									
EEL RIVER BASIN (CONTINUED)									
EEL RIVER AT FORT SEWARD	2107	1955-	USGS	12-22-64	87.2(AC)	561,000	2-22-77	11.25	2850
SOUTH FORK EEL RIVER NEAR MIRANDA	537	1939-	USGS	12-22-64	46.0(A)	199,000	3-10-77	7.26	2250
HULL CREEK NEAR WEOTT	28	1960-	USGS	12-22-64	20.6(AC)	6,520	9-19-77	4.35	150
EEL RIVER AT SCOTIA	3113	1910-	USGS	12-23-64	72.0(A)	752,000	3-10-77	12.71	5800
VAN DUZEN RIVER NEAR BRIDGEVILLE	222	1950-	USGS	12-22-64	24.0(A)	48,700	3 -9-77	7.11	2150
MATTOLE RIVER BASIN									
MATTOLE RIVER NEAR PETROLIA	240	1911-13 1915-	USGS	12-22-55	29.6(C)	90,400	3 -9-77	7.23	3300
NOYO RIVER BASIN									
NOYO RIVER NEAR FORT BRAGG	106	1951-	USGS	12-22-64	26.3	24,000	3-15-77	4.48	150
NAVARRO RIVER BASIN									
NAVARRO RIVER NEAR NAVARRO	303	1950-	USGS	12-22-55	40.6(C)	64,500	3-16-77	3.84	650
RUSSIAN RIVER BASIN									
RUSSIAN RIVER NEAR UKIAH	100	1911-13 1952-	USGS	12-21-55	21.0	18,900	3-15-77	8.18	250
EAST FORK RUSSIAN RIVER NEAR CALPELLA	92	1941-	USGS	12-22-64	20.2	18,700	11-23-76	6.69	300
RUSSIAN RIVER NEAR HOPLAND	362	1939-	USGS	12-22-55 12- -37	27.0 30.0(A)	45,000 - -	3-16-77	5.31	250
RUSSIAN RIVER NEAR CLOVERDALE	503	1951-	USGS	12-22-64	31.6(C)	55,200	3-16-77	3.42	350
RUSSIAN RIVER NEAR HEALDSBURG	793	1939-	USGS	12-23-64 12- -37	27.0 30.8(A)	71,300 - -	3-16-77	1.87	450
DRY CREEK NEAR CLOVERDALE	88	1941-	USGS	12-22-64	18.1	18,100	1 -2-77	3.77	350
DRY CREEK NEAR GEYSERVILLE	162	1959-	USGS	1-31-63	17.5	32,400	1 -2-77	4.69	800
RUSSIAN RIVER NEAR GUERNEVILLE (HACIENDA BR.)	1340	1939-	USGS	12-23-64 12-23-55	49.6(A) 49.7(A)	93,400 - -	3-16-77	7.50	1350
SAN FRANCISCO BAY AREA									
WALKER CREEK BASIN									
WALKER CREEK NEAR TOMALES	37	1959-	USGS	1-16-73	22.9	6,600	1 -3-77	4.84	20
CORTE MADERA CREEK BASIN									
CORTE MADERA CREEK AT ROSS	18	1951-	USGS	12-22-55	17.5	3,620	1 -2-77	7.36	150
NOVATO CREEK BASIN									
NOVATO CREEK NEAR NOVATO	18	1946-	USGS	1-14-70	11.0	2,000	11-14-76	4.28	150

STREAM AND STATION	DRAINAGE AREA IN SQ KM	PERIOD OF RECORD	SOURCE OF RECORD	PREVIOUS MAXIMUM OF RECORD			1976-1977 WATER YEAR		
				DATE	STAGE IN METRES	DISCHARGE IN M /S	DATE	STAGE IN METRES	DISCHARGE IN M /S
NORTH COASTAL AREA (CONTINUED)									
EEL RIVER BASIN (CONTINUED)									
EEL RIVER AT FORT SEWARD	5457	1955-	USGS	12-22-64	26.6(AC)	15,900	2-22-77	3.43	80
SOUTH FORK EEL RIVER NEAR MIRANDA	1390	1939-	USGS	12-22-64	14.0(A)	5,660	3-10-77	2.21	63
BULL CREEK NEAR MYERS	72	1960-	USGS	12-22-64	6.3(AC)	184	9-19-77	1.33	4.9
EEL RIVER AT SCOTIA	8062	1910-	USGS	12-23-64	21.9(A)	21,300	3-10-77	3.87	163
VAN DUZEN RIVER NEAR BRIDGEVILLE	574	1950-	USGS	12-22-64	7.3(A)	1,380	3 -9-77	2.17	60
MATTOLE RIVER BASIN									
MATTOLE RIVER NEAR PETROLIA	622	1911-13 1915-	USGS	12-22-55	9.0(C)	2,560	3 -9-77	2.20	92
NOYO RIVER BASIN									
NOYO RIVER NEAR FORT BRAGG	274	1951-	USGS	12-22-64	8.0	679	3-15-77	1.37	4.3
NAVARRO RIVER BASIN									
NAVARRO RIVER NEAR NAVARRO	784	1950-	USGS	12-22-55	12.4(C)	1,830	3-16-77	1.17	17
RUSSIAN RIVER BASIN									
RUSSIAN RIVER NEAR UKIAH	259	1911-13 1952-	USGS	12-21-55	6.4	535	3-15-77	2.49	7.7
EAST FORK RUSSIAN RIVER NEAR CALPELLA	238	1941-	USGS	12-22-64	6.2	529	11-23-76	2.04	8.9
RUSSIAN RIVER NEAR HOPLAND	937	1939-	USGS	12-22-55 12- -37	8.2 9.1(A)	1,270<>	3-16-77	1.62	6.4
RUSSIAN RIVER NEAR CLOVERDALE	1302	1951-	USGS	12-22-64	9.6(C)	1,560	3-16-77	1.04	10
RUSSIAN RIVER NEAR HEALDSBURG	2053	1939-	USGS	12-23-64 12- -37	8.2 9.4(A)	2,020<>	3-16-77	0.57	12
DRY CREEK NEAR CLOVERDALE	227	1941-	USGS	12-22-64	5.5	512	1 -2-77	1.15	9.3
DRY CREEK NEAR GEYSERVILLE	419	1959-	USGS	1-31-63	5.3	917	1 -2-77	1.43	23
RUSSIAN RIVER NEAR GUERNEVILLE (HACIENDA BR.)	3471	1939-	USGS	12-23-64 12-23-55	15.1(A) 15.1(A)	2,640<>	3-16-77	2.29	38
SAN FRANCISCO BAY AREA									
WALKER CREEK BASIN									
WALKER CREEK NEAR TOMALES	95	1959-	USGS	1-16-73	7.0	186	1 -3-77	1.48	0.5
CORTE MADERA CREEK BASIN									
CORTE MADERA CREEK AT MUSS	46	1951-	USGS	12-22-55	5.3	102	1 -2-77	2.24	4.1
NOVATO CREEK BASIN									
NOVATO CREEK NEAR NOVATO	46	1946-	USGS	1-14-70	3.4	56	11-14-76	1.30	4.7

STREAM AND STATION	DRAINAGE AREA IN SQ MILES	PERIOD OF RECORD	SOURCE OF RECORD	PREVIOUS MAXIMUM OF RECORD DATE	PREVIOUS MAXIMUM OF RECORD STAGE IN FEET	PREVIOUS MAXIMUM OF RECORD DISCHARGE IN CFS	1976-1977 WATER YEAR DATE	1976-1977 WATER YEAR STAGE IN FEET	1976-1977 WATER YEAR DISCHARGE IN CFS
SAN FRANCISCO BAY AREA (CONTINUED)									
SONOMA CREEK BASIN									
SONOMA CREEK AT AGUA CALIENTE	58	1955-	USGS	12-22-55	17.1(C)	8,880	3-15-77	4.88	100
NAPA RIVER BASIN									
NAPA RIVER NEAR ST. HELENA	81	1929-32 1939-	USGS	12-22-55	16.2	12,600	3-16-77	3.74	150
NAPA RIVER NEAR NAPA	218	1929-32 1959-	USGS	1-31-63	27.6	16,900	3-16-77	3.17	50
PACHECO CREEK BASIN									
SAN RAMON CREEK AT SAN RAMON	6	1952-	USGS	10-13-62	17.0	1,600	1-2-77	2.32	20
SAN LORENZO CREEK BASIN									
SAN LORENZO CREEK AT HAYWARD	38	1939-40 1946-	USGS	10-13-62 12-22-55	19.7(A) 20.8(A)	7,460 - -	3-15-77	5.36	20
ALAMEDA CREEK BASIN									
ARROYO MOCHO NEAR PLEASANTON	141	1962-	USGS	2-1-63 1-18-73	8.60(C) 12.4	1,760 1,700	1-2-77	9.03	100
ARROYO VALLE NEAR LIVERMORE	147	1912-30 1957-	USGS	12-23-55	13.9(A)	18,200	9-4-77	2.69	30
ARROYO VALLE AT PLEASANTON	171	1957-	USGS	4-3-58	25.4	11,300	1-2-77	7.45	7
ALAMEDA CREEK NEAR NILES	633	1891-	USGS	12-23-55	14.9	29,000	1-3-77	4.30	450
PATTERSON CREEK AT UNION CITY	--	1958-	USGS	2-1-63	20.4(A)	10,500	1-3-77	8.18	1300
COYOTE CREEK BASIN									
COYOTE CREEK NEAR MADRONE	196	1902-12 1916-	USGS	3-7-11	- -	25,000	10-1-76	2.33	50
UPPER PENITENCIA CREEK AT SAN JOSE	22	1961-	USGS	1-21-67	6.2	15,000	1-2-77	3.10	7
GUADALUPE RIVER BASIN									
GUADALUPE RIVER AT SAN JOSE	144	1929-	USGS	4-2-58	16.6	9,150	1-2-77	3.41	750
SARATOGA CREEK AT SARATOGA	9	1933-	USGS	12-22-55	6.4(C)	2,730	3-15-77	3.29	50
MATADERO CREEK BASIN									
MATADERO CREEK AT PALO ALTO	7	1952-		2-27-73	5.5	1,100	1-2-77	1.68	100
SAN FRANCISQUITO CREEK BASIN									
SAN FRANCISQUITO CREEK AT STANFORD UNIVERSITY	38	1930-41 1950-	USGS	12-22-55	13.6	5,560	3-15-77	1.66	80

STREAM AND STATION	DRAINAGE AREA IN SQ KM	PERIOD OF RECORD	SOURCE OF RECORD	PREVIOUS MAXIMUM OF RECORD: DATE	PREVIOUS MAXIMUM OF RECORD: STAGE IN METRES	PREVIOUS MAXIMUM OF RECORD: DISCHARGE IN M /S	1976-1977 WATER YEAR: DATE	1976-1977 WATER YEAR: STAGE IN METRES	1976-1977 WATER YEAR: DISCHARGE IN M /S
SAN FRANCISCO BAY AREA (CONTINUED)									
SONOMA CREEK BASIN									
SONOMA CREEK AT AGUA CALIENTE	150	1955-	USGS	12-22-55	5.2(C)	251	3-15-77	1.49	2.9
NAPA RIVER BASIN									
NAPA RIVER NEAR ST. HELENA	209	1929-32 1939-	USGS	12-22-55	4.9	356	3-16-77	1.14	3.7
NAPA RIVER NEAR NAPA	568	1929-32 1959-	USGS	1-31-63	8.4	478	3-18-77	0.97	1.5
PACHECO CREEK BASIN									
SAN RAMON CREEK AT SAN RAMON	15	1952-	USGS	10-13-62	5.2	45	1 -2-77	0.71	0.5
SAN LORENZO CREEK BASIN									
SAN LORENZO CREEK AT HAYWARD	98	1939-40 1946-	USGS	10-13-62 12-22-55	6.0(A) 6.3(A)	211 - -	3-15-77	1.63	0.7
ALAMEDA CREEK BASIN									
ARROYO MOCHO NEAR PLEASANTON	365	1962-	USGS	2- 1-63 1-18-73	2.6(C) 3.8	99 48	1 -2-77	2.75	3.4
ARROYO VALLE NEAR LIVERMORE	380	1912-30 1957-	USGS	12-23-55	4.2(A)	515	9 -4-77	0.82	0.8
ARROYO VALLE AT PLEASANTON	442	1957-	USGS	4- 3-58	1.7	319	1 -2-77	2.27	0.2
ALAMEDA CREEK NEAR NILES	1639	1891-	USGS	12-23-55	4.5	821	1 -3-77	1.31	12
PATTERSON CREEK AT UNION CITY	- -	1958-	USGS	2- 1-63	6.2(A)	297	1 -3-77	2.49	37
COYOTE CREEK BASIN									
COYOTE CREEK NEAR MADRONE	507	1902-12 1916-	USGS	3- 7-11	- -	707	10 -1-76	0.71	1.4
UPPER PENITENCIA CREEK AT SAN JOSE	56	1961-	USGS	1-21-67	1.9	424	1 -2-77	0.94	0.2
GUADALUPE RIVER BASIN									
GUADALUPE RIVER AT SAN JOSE	372	1929-	USGS	4- 2-58	5.1	259	1 -2-77	1.04	20
SARATOGA CREEK AT SARATOGA	23	1933-	USGS	12-22-55	2.0(C)	77	3-15-77	1.00	1.8
MATADERO CREEK BASIN									
MATADERO CREEK AT PALO ALTO	18	1952-	USGS	2-21-73	1.7	31	1 -2-77	0.51	3.2
SAN FRANCISQUITO CREEK BASIN									
SAN FRANCISQUITO CREEK AT STANFORD UNIVERSITY	98	1930-41 1950-	USGS	12-22-55	4.1	157	3-15-77	0.51	2.3

STREAM AND STATION	DRAINAGE AREA IN SQ MILES	PERIOD OF RECORD	SOURCE OF RECORD	PREVIOUS MAXIMUM OF RECORD			1976-1977 WATER YEAR		
				DATE	STAGE IN FEET	DISCHARGE IN CFS	DATE	STAGE IN FEET	DISCHARGE IN CFS
CENTRAL COASTAL AREA									
REDWOOD CREEK BASIN									
REDWOOD CREEK AT REDWOOD CITY	2	1959-	USGS	1-31-63	9.4	644	1-2-77	2.60	40
PESCADERO CREEK BASIN									
PESCADERO CREEK NEAR PESCADERO	46	1951-	USGS	12-23-55	21.3	9,420	3-16-77	2.43	70
SAN LORENZO RIVER BASIN									
SAN LORENZO RIVER AT BIG TREES	111	1936-	USGS	12-23-55	22.6	30,400	3-15-77	4.36	250
SOQUEL CREEK BASIN									
SOQUEL CREEK AT SOQUEL	40	1951-	USGS	12-23-55	22.3	15,800	12-30-76	3.46	100
PAJARO RIVER BASIN									
BODFISH CREEK NEAR GILROY	7	1959-	USGS	1-31-63	8.3	1,240	3-15-77	2.61	3
TRES PINOS CREEK NEAR TRES PINOS	206	1939-	USGS	4- 4-41	7.8	8,060	10 -1-76	4.94	90
SAN BENITO RIVER NEAR HOLLISTER	586	1949-	USGS	4- 3-58	16.3	11,600	10 -2-76	4.99	50
PAJARO RIVER AT CHITTENDEN	1186	1939-	USGS	12-24-55 4- 3-58	32.5 33.1	24,000	10 -2-76	2.40	20
CORRALITOS CREEK AT FREEDOM	28	1956-	USGS	12-22-55	15.6(A)	3,620	1 -2-77	2.91	70
SALINAS RIVER BASIN									
SALINAS RIVER NEAR POZO	70	1942-	USGS	1-25-69 1-25-69	13.9(C) 15.5(A)	18,600	3-16-77	10.75	10
JACK CREEK NEAR TEMPLETON	25	1949-	USGS	2-24-69	11.3	8,160	1 -6-77	2.15	4
ESTRELLA RIVER NEAR ESTRELLA	922	1954-	USGS	2-24-69	10.4(A)	32,500	10 -1-76	1.96	80
SALINAS RIVER NEAR BRADLEY	2535	1948-	USGS	2-24-69	20.3(A)	117,000	8 -5-77	7.09	700
ARROYO SECO NEAR SOLEDAD	244	1901-	USGS	4- 3-58	16.4	28,300	1 -3-77	4.20	550
SALINAS RIVER NEAR SPRECKELS	4156	1900-01 1929-	USGS	2-26-69 1-16-52	26.5(C) 26.9(AC)	83,100 - -	10 -4-76	5.33	70
CARMEL RIVER BASIN									
CARMEL RIVER AT ROBLES DEL RIO	193	1957-	USGS	4- 2-58 12-23-55	10.5 11.7(A)	7,100 6,930	10 -1-76	3.89	30
BIG SUR RIVER BASIN									
BIG SUR RIVER NEAR BIG SUR	47	1950-	USGS	4- 2-58	11.6	5,680	1 -2-77	4.78	400

PEAK FLOWS AND STAGES (CONTINUED)
METRIC UNITS

STREAM AND STATION	DRAINAGE AREA IN SQ KM	PERIOD OF RECORD	SOURCE OF RECORD	PREVIOUS MAXIMUM OF RECORD			1976-1977 WATER YEAR		
				DATE	STAGE IN METRES	DISCHARGE IN M /S	DATE	STAGE IN METRES	DISCHARGE IN M /S
CENTRAL COASTAL AREA									
REDWOOD CREEK BASIN									
REDWOOD CREEK AT REDWOOD CITY	5	1959-	USGS	1-31-63	2.9	18	1 -2-77	0.79	1.2
PESCADERO CREEK BASIN									
PESCADERO CREEK NEAR PESCADERO	119	1951-	USGS	12-23-55	6.5	266	3-16-77	0.78	1.9
SAN LORENZO RIVER BASIN									
SAN LORENZO RIVER AT BIG TREES	287	1936-	USGS	12-23-55	6.9	860	3-15-77	1.33	7.4
SOQUEL CREEK BASIN									
SOQUEL CREEK AT SOQUEL	104	1951-	USGS	12-23-55	6.8	447	12-30-76	1.05	3.3
PAJARO RIVER BASIN									
HOOPER CREEK NEAR GILROY	18	1959-	USGS	1-31-63	2.5	35	3-15-77	0.80	0.1
TRES PINOS CREEK NEAR TRES PINOS	533	1939-	USGS	4- 4-41	2.4	228	10 -1-76	1.51	2.5
SAN BENITO RIVER NEAR HOLLISTER	1517	1949-	USGS	4- 3-58	5.0	328	10 -2-76	1.52	1.3
PAJARO RIVER AT CHITTENDEN	3071	1939-	USGS	12-24-55 4- 3-58	9.9 10.1	679	10 -2-76	0.73	0.5
CORRALITOS CREEK AT FREEDOM	72	1956-	USGS	12-22-55	4.8(A)	102	1 -2-77	0.89	1.9
SALINAS RIVER BASIN									
SALINAS RIVER NEAR POZO	181	1902-	USGS	1-25-69 1-25-69	4.2(C) 4.7(A)	526	3-16-77	3.28	0.3
JACK CREEK NEAR TEMPLETON	60	1949-	USGS	2-24-69	3.4	231	1 -6-77	0.66	0.1
ESTRELLA RIVER NEAR ESTRELLA	2387	1954-	USGS	2-24-69	3.2(A)	920	10 -1-76	0.60	2.2
SALINAS RIVER NEAR BRADLEY	6565	1948-	USGS	2-24-69	6.2(A)	3,310	8 -5-77	2.16	19
ARROYO SECO NEAR SOLEDAD	631	1901-	USGS	4- 3-58	5.0	801	1 -3-77	1.28	15
SALINAS RIVER NEAR SPRECKELS	10763	1900-01 1929-	USGS	2-26-69 1-16-52	8.1(C) 8.2(AC)	2,350 - -	10 -4-76	1.62	2.1
CARMEL RIVER BASIN									
CARMEL RIVER AT ROBLES DEL RIO	499	1957-	USGS	4- 2-58 12-23-55	3.2 3.6(A)	201 196	10 -1-76	1.19	1.0
BIG SUR RIVER BASIN									
BIG SUR RIVER NEAR BIG SUR	121	1950-	USGS	4- 2-58	3.5	160	1 -2-77	1.46	11

STREAM AND STATION	DRAINAGE AREA IN SQ MILES	PERIOD OF RECORD	SOURCE OF RECORD	PREVIOUS MAXIMUM OF RECORD DATE	PREVIOUS MAXIMUM OF RECORD STAGE IN FEET	PREVIOUS MAXIMUM OF RECORD DISCHARGE IN CFS	1976-1977 WATER YEAR DATE	1976-1977 WATER YEAR STAGE IN FEET	1976-1977 WATER YEAR DISCHARGE IN CFS
CENTRAL COASTAL AREA (CONTINUED)									
ARROYO DE LA CRUZ BASIN									
ARROYO DE LA CRUZ NEAR SAN SIMEON	41	1950-	USGS	12- 6-66	15.3	35,200	1 -2-77	3.01	300
SANTA MARIA RIVER BASIN									
SISQUOC RIVER NEAR GAREY	471	1940-	USGS	1-25-69	13.0	24,500	1 -6-77	3.84	70
SANTA MARIA RIVER AT GUADALUPE	1741	1940-	USGS	1-16-52	8.2(C)	32,800	10 -2-76	5.55	20
SANTA YNEZ RIVER BASIN									
SANTA YNEZ RIVER BELOW GIBRALTAR DAM NEAR SANTA BARBARA	216	1920-	USGS	1-25-69	25.8	54,200	10 -5-76		3
SANTA CRUZ CREEK NEAR SANTA YNEZ	74	1941-	USGS	2-24-69	14.5(A)	7,050	5 -9-77	8.14	70
SAN JOSE CREEK BASIN									
SAN JOSE CREEK NEAR GOLETA	6	1941-	USGS	1-25-69 1-21-43	10.1 12.7	2,000 - -	1 -2-77	4.95	300
ATASCADERO CREEK BASIN									
ATASCADERO CREEK NEAR GOLETA	19	1941-	USGS	1-25-69	13.0	5,230	1 -2-77	6.08	950
CARPINTERIA CREEK BASIN									
CARPINTERIA CREEK NEAR CARPINTERIA	13	1941-	USGS	12-27-71	14.1(A)	8,880	1 -2-77	2.87	250
SOUTH COASTAL AREA									
VENTURA CREEK BASIN									
MATILIJA CREEK AT MATILIJA HOT SPRINGS	55	1927-	USGS	1-25-69	16.5	20,000	1 -9-77	2.76	80
VENTURA RIVER NEAR MEINERS OAKS	76	1959-	USGS	1-25-69	- -	28,000(E)	10 -1-76	4.11	150
COYOTE CREEK NEAR OAK VIEW	13	1958-	USGS	1-25-69	12.0	8,000	1 -2-77	5.71	150
VENTURA RIVER NEAR VENTURA	188	1911-14 1929-	USGS	1-25-69	24.3(A)	58,000	1 -2-77	8.01	850
SANTA CLARA RIVER BASIN									
SANTA CLARA RIVER AT LOS ANGELES-VENTURA CO. LINE	644	1952-	USGS	1-25-69	19.0	68,800	5 -8-77	7.12	1900
PIRU CREEK ABOVE LAKE PIRU	372	1955-	USGS	2-25-69	18.6(A)	31,200	5 -8-77	5.26	300
SESPE CREEK NEAR FILLMORE	251	1911-13 1927-	USGS	1-25-69 2-25-69	20.8 25.0(A)	60,000 - -	5 -9-77	11.49	1000
SANTA PAULA CREEK NEAR SANTA PAULA	40	1927-	USGS	2-25-69	15.2(A)	21,000	1 -2-77	3.79	150
MALIBU CREEK BASIN									
MALIBU CREEK AT CRATER CAMP NEAR CALABASAS	105	1931-	USGS	1-25-69	21.4	33,800	1 -7-77	4.48	600
BALLONA CREEK BASIN									
BALLONA CREEK NEAR CULVER CITY	90	1928-	USGS	11-21-67	14.9	32,500	10-23-76	8.21	10200

PEAK FLOWS AND STAGES (CONTINUED)
METRIC UNITS

STREAM AND STATION	DRAINAGE AREA IN SQ KM	PERIOD OF RECORD	SOURCE OF RECORD	PREVIOUS MAXIMUM OF RECORD			1976-1977 WATER YEAR		
				DATE	STAGE IN METRES	DISCHARGE IN M /S	DATE	STAGE IN METRES	DISCHARGE IN M /S
CENTRAL COASTAL AREA (CONTINUED)									
ARROYO DE LA CRUZ BASIN									
ARROYO DE LA CRUZ NEAR SAN SIMEON	106	1950-	USGS	12- 6-66	4.7	996	1 -2-77	0.92	7.9
SANTA MARIA RIVER BASIN									
SISQUOC RIVER NEAR GAREY	1219	1940-	USGS	1-25-69	4.0	693	1 -6-77	1.17	2.0
SANTA MARIA RIVER AT GUADALUPE	4509	1940-	USGS	1-16-52	2.5(C)	928	10 -2-76	1.69	0.7
SANTA YNEZ RIVER BASIN									
SANTA YNEZ RIVER BELOW GIBRALTAR DAM NEAR SANTA BARBARA	559	1920-	USGS	1-25-69	7.9	1,530	10 -5-76		0.1
SANTA CRUZ CREEK NEAR SANTA YNEZ	191	1941-	USGS	2-24-69	4.4(A)	199	5 -9-77	2.48	2.0
SAN JOSE CREEK BASIN									
SAN JOSE CREEK NEAR GOLETA	15	1941-	USGS	1-25-69 1-21-43	3.1 3.9	56 - -	1 -2-77	1.51	8.1
ATASCADERO CREEK BASIN									
ATASCADERO CREEK NEAR GOLETA	49	1941-	USGS	1-25-69	4.0	148	1 -2-77	1.85	27
CARPINTERIA CREEK BASIN									
CARPINTERIA CREEK NEAR CARPINTERIA	33	1941-	USGS	12-27-71	4.3(A)	251	1 -2-77	0.87	7.0
SOUTH COASTAL AREA									
VENTURA CREEK BASIN									
MATILIJA CREEK AT MATILIJA HOT SPRINGS	142	1927-	USGS	1-25-69	5.0	566	1 -9-77	0.84	2.3
VENTURA RIVER NEAR MEINERS OAKS	196	1959-	USGS	1-25-69	- -	792(E)	10 -1-76	1.25	4.1
COYOTE CREEK NEAR OAK VIEW	33	1958-	USGS	1-25-69	3.7	226	1 -2-77	1.74	4.5
VENTURA RIVER NEAR VENTURA	484	1911-14 1929-	USGS	1-25-69	7.4(A)	1,640	1 -2-77	2.44	24
SANTA CLARA RIVER BASIN									
SAN CLARA RIVER AT LOS ANGELES-VENTURA CO. LINE	1667	1952-	USGS	1-25-69	5.8	1,950	5 -8-77	2.17	53
PIRU CREEK ABOVE LAKE PIRU	963	1955-	USGS	2-25-69	5.7(A)	883	5 -8-77	1.60	8.5
SESPE CREEK NEAR FILLMORE	650	1911-13 1927-	USGS	1-25-69 2-25-69	6.3 7.6(A)	1,700 - -	5 -9-77	3.50	28
SANTA PAULA CREEK NEAR SANTA PAULA	104	1927-	USGS	2-25-69	4.6(A)	594	1 -2-77	1.16	3.8
MALIBU CREEK BASIN									
MALIBU CREEK AT CRATER CAMP NEAR CALABASAS	271	1931-	USGS	1-25-69	6.5	957	1 -7-77	1.37	16
BALLONA CREEK BASIN									
BALLONA CREEK NEAR CULVER CITY	233	1928-	USGS	11-21-67	4.5	920	10-23-76	2.50	287

STREAM AND STATION	DRAINAGE AREA IN SQ MILES	PERIOD OF RECORD	SOURCE OF RECORD	PREVIOUS MAXIMUM OF RECORD DATE	PREVIOUS MAXIMUM OF RECORD STAGE IN FEET	PREVIOUS MAXIMUM OF RECORD DISCHARGE IN CFS	1976-1977 WATER YEAR DATE	1976-1977 WATER YEAR STAGE IN FEET	1976-1977 WATER YEAR DISCHARGE IN CFS
SOUTH COASTAL AREA (CONTINUED)									
LOS ANGELES RIVER BASIN									
LOS ANGELES RIVER AT SEPULVEDA DAM	158	1929-	USGS	1-25-69	11.4	13,800	5 -8-77	8.85	9500
LOS ANGELES RIVER AT LOS ANGELES	514	1929-	USGS	3- 2-38	- -	67,000	1 -3-77	8.10	23300
RIO HONDO NEAR DOWNEY	143	1928-	USGS	1-25-68	15.2	46,900	10-23-76	3.22	2900
SANTA ANA RIVER BASIN									
SANTA ANA RIVER NEAR MENTONE	209	1896-	USGS	3- 2-38	14.3(C)	52,300	5 -8-77	4.50	500
SAN GABRIEL RIVER BELOW SANTA FE DAM NEAR BALDWIN PARK	236	1942-	USGS	1-26-69	22.2	30,900	5-16-77	10.57	60
SANTA ANA RIVER AT 'E' ST NEAR SAN BERNARDINO	532	1939-54 1966-	USGS	2-25-69	16.5	28,000			N/A
MILL CREEK NEAR YUCAIPA	42	1919-38 1947-	USGS	1-25-69	16.8(A)	35,400	1 -3-77	8.32	100
LYTLE CREEK NEAR FONTANA	46	1918-	USGS	1-25-69	15.0(A)	35,900	1 -3-77	4.16	300
SANTA ANA RIVER AT M.W.D. CROSSING	854	1970-	USGS	12-29-70	10.9	5,300	1 -3-77	9.38	1650
SAN JACINTO RIVER NEAR SAN JACINTO	141	1920-	USGS	2-16-27	- -	45,000	5 -9-77	9.92	40
SANTIAGO CREEK AT MODJESKA	13	1961-	USGS	2-25-69	6.2	6,520	1 -7-77		20
SANTIAGO CREEK AT SANTA ANA	95	1928-	USGS	2-25-69 1-16-52	9.1(C) 9.8	6,600 - -	8-17-77	2.66	150
SAN JUAN CREEK BASIN									
SAN JUAN CREEK NEAR SAN JUAN CAPISTRANO	106	1928-	USGS	2-25-69	5.6(AC)	22,400	5 -8-77	2.28	50
SANTA MARGARITA RIVER BASIN									
SANTA MARGARITA RIVER NEAR TEMECULA	588	1923-	USGS	2-16-27	14.6(C)	25,000	1 -6-77	4.29	350
SANTA MARGARITA RIVER AT YSIDORA	739	1923-	USGS	2-16-27	18.0(C)	33,600			NO FLOW
SAN LUIS REY RIVER BASIN									
SAN LUIS REY RIVER AT MONSERATE NARROWS NR PALA	373	1935-41 1946-	USGS	2- 7-37	8.7(C)	- -	1 -6-77	4.55	20
SAN LUIS REY RIVER NEAR BONSALL	512	1916-18 1929-	USGS	3- 3-38	16.0	18,100	1 -6-77	8.63	250
SAN DIEGUITO RIVER BASIN									
SANTA YSABEL CREEK NEAR RAMONA	112	1912-23 1943-	USGS	1-27-16	14.0(C)	28,400	5-10-77	2.51	10
SANTA YSABEL CREEK NEAR SAN PASQUAL	128	1905-12 1947-	USGS	3-24-06	6.3(C)	8,000	1 -3-77	1.48	7
SAN DIEGO RIVER BASIN									
SAN DIEGO RIVER NEAR SANTEE	377	1912-	USGS	1-27-16	25.1(C)	70,200	5 -9-77	6.81	950
SWEETWATER RIVER BASIN									
SWEETWATER RIVER NEAR DESCANSO	46	1905-27 1956-	USGS	2-16-27	13.2(AC)	11,200	1 -3-77	1.22	40
TIJUANA RIVER BASIN									
TIJUANA RIVER NEAR DULZURA	481	1936-	USGS	2- 7-37	8.5	4,700	1 -7-77	2.42	9

PEAK FLOWS AND STAGES (CONTINUED)
METRIC UNITS

STREAM AND STATION	DRAINAGE AREA IN SQ KM	PERIOD OF RECORD	SOURCE OF RECORD	PREVIOUS AXIMUM OF RECORD DATE	PREVIOUS AXIMUM OF RECORD STAGE IN METRES	PREVIOUS AXIMUM OF RECORD DISCHARGE IN M /S	1976-1977 WATER YEAR DATE	1976-1977 WATER YEAR STAGE IN METRES	1976-1977 WATER YEAR DISCHARGE IN M /S
SOUTH COASTAL AREA (CONTINUED)									
LOS ANGELES RIVER BASIN									
LOS ANGELES RIVER AT SEPULVEDA DAM	409	1929-	USGS	1-25-69	3.5	390	5 -8-77	2.70	249
LOS ANGELES RIVER AT LOS ANGELES	1331	1929-	USGS	3- 2-38	- -	1,900	1 -3-77	2.47	659
RIO HONDO NEAR DOWNEY	370	1928-	USGS	1-25-69	4.6	1,330	10-23-76	0.98	81
SANTA ANA RIVER BASIN									
SANTA ANA RIVER NEAR MENTONE	541	1896-	USGS	3- 2-38	4.4(C)	1,480	5 -8-77	1.37	14
SAN GABRIEL RIVER BELOW SANTA FE DAM NEAR BALDWIN PARK	611	1942-	USGS	1-26-69	6.8	874	5-16-77	3.22	1.7
SANTA ANA RIVER AT 'E' ST NEAR SAN BERNARDINO	1377	1939-54 1966-	USGS	2-25-69	5.0	792			N/A
MILL CREEK NEAR YUCAIPA	108	1919-38 1947-	USGS	1-25-69	5.1(A)	1,000	1 -3-77	2.54	3.1
LYTLE CREEK NEAR FONTANA	119	1918-	USGS	1-25-69	4.6(A)	1,020	1 -3-77	1.27	8.6
SANTA ANA RIVER AT M.W.D. CROSSING	2211	1970-	USGS	12-29-70	3.3	150	1 -3-77	2.84	46
SAN JACINTO RIVER NEAR SAN JACINTO	365	1920-	USGS	2-16-27	- -	1,270	5 -9-77	3.02	1.2
SANTIAGO CREEK AT MODJESKA	33	1961-	USGS	2-25-69	1.9	184	1 -7-77		0.5
SANTIAGO CREEK AT SANTA ANA	246	1928-	USGS	2-25-69 1-16-52	2.8(C) 3.0	186 - -	8-17-77	0.81	4.6
SAN JUAN CREEK BASIN									
SAN JUAN CREEK NEAR SAN JUAN CAPISTRANO	274	1928-	USGS	2-25-69	1.7(AC)	634	5 -8-77	0.69	1.3
SANTA MARGARITA RIVER BASIN									
SANTA MARGARITA RIVER NEAR TEMECULA	1522	1923-	USGS	2-16-27	4.5(C)	707	1 -6-77	1.31	9.4
SANTA MARGARITA RIVER AT YSIDORA	1914	1923-	USGS	2-16-27	5.5(C)	951			NO FLOW
SAN LUIS REY RIVER BASIN									
SAN LUIS REY RIVER AT MONSERATE NARROWS NR PALA	966	1935-41 1946-	USGS	2- 7-37	2.7(C)	- -	1 -6-77	1.39	0.6
SAN LUIS REY RIVER NEAR BONSALL	1326	1916-18 1929-	USGS	3- 3-38	4.9	512	1 -6-77	2.63	7.3
SAN DIEGUITO RIVER BASIN									
SANTA YSABEL CREEK NEAR RAMONA	290	1912-23 1943-	USGS	1-27-16	4.3(C)	804	5-10-77	0.77	0.4
SANTA YSABEL CREEK NEAR SAN PASQUAL	331	1905-12 1947-	USGS	3-24-06	1.9(C)	226	1 -3-77	0.45	0.2
SAN DIEGO RIVER BASIN									
SAN DIEGO RIVER NEAR SANTEE	976	1912-	USGS	1-27-16	7.7(C)	1,990	5 -9-77	2.08	26
SWEETWATER RIVER BASIN									
SWEETWATER RIVER NEAR DESCANSO	119	1905-27 1956-	USGS	2-16-27	4.0(AC)	317	1 -3-77	0.37	1.2
TIJUANA RIVER BASIN									
TIJUANA RIVER NEAR OUIZURA	1245	1936-	USGS	2- 7-37	2.6	133	1 -7-77	0.74	0.3

STREAM AND STATION	DRAINAGE AREA IN SQ MILES	PERIOD OF RECORD	SOURCE OF RECORD	PREVIOUS MAXIMUM OF RECORD: DATE	STAGE IN FEET	DISCHARGE IN CFS	1976-1977 WATER YEAR: DATE	STAGE IN FEET	DISCHARGE IN CFS
CENTRAL VALLEY AREA									
SACRAMENTO RIVER BASIN									
SACRAMENTO RIVER AT DELTA	425	1944-	USGS	12-22-64	20.1	38,800	9-19-77	7.37	2300
PIT RIVER NEAR MCARTHUR	2475	1904-31 1951-	USGS	3-19-07	16.7	33,800	5-13-77	4.10	450
PIT RIVER BELOW PIT NO. 4 DAM	4647	1922-	USGS	1-25-70	18.1	32,500(E)	10-30-76	0.50	250
MCCLOUD RIVER ABOVE SHASTA LAKE	604	1945-	USGS	12-22-55	28.2	45,200	9-29-77	10.70	750
SACRAMENTO RIVER AT KESWICK	6468	1938-	USGS-DWR	2-23-40	47.2(C)	186,000	7-7-77	14.52	11800
CLEAR CREEK AT FRENCH GULCH	115	1950-	USGS	12-22-64	13.7	7,600	5-2-77	3.75	100
CLEAR CREEK NEAR IGO	228	1940-	USGS	12-21-55	13.8	24,500	9-19-77	3.40	300
COW CREEK NEAR MILLVILLE	425	1949-	USGS	12-27-51	21.6	45,200	5-11-77	0.53	1700
COTTONWOOD CREEK NEAR COTTONWOOD	922	1940-	USGS	12-22-64	19.6	60,000	9-20-77	8.52	2200
BATTLE CREEK BELOW COLEMAN FISH HATCHERY NEAR COTTONWOOD	358	1961-	USGS	12-11-37	15.8(AC)	35,000	1-2-77	2.83	1000
SACRAMENTO RIVER AT BEND BRIDGE	--	1960-	DWR	1-24-70	48.3	158,000	6-30-77		11700
PAYNES CREEK NEAR RED BLUFF	93	1949-	USGS	12- 1-61	11.3	10,600	1-2-77	4.80	700
RED BANK CREEK NEAR RED BLUFF	94	1948-	DWR	1- 5-65	10.1	9,730	5-11-77	4.70	150
ANTELOPE CREEK NEAR RED BLUFF	123	1940-	USGS	1-23-70	18.0	17,200	1-2-77	7.38	950
ELDER CREEK NEAR PASKENTA	93	1948-	USGS	2-24-58	13.9(C)	11,700	3-16-77	3.13	800
MILL CREEK NEAR LOS MOLINOS	131	1909-13 1928-	USGS	12-11-37	23.4(A)	36,400	9-29-77	3.03	450
THOMES CREEK AT PASKENTA	194	1920-	USGS-DWR	12-22-64	15.3	37,800	3-16-77	3.55	300
DEER CREEK NEAR VINA	208	1911-15 1920-	USGS-DWR	12-10-37	19.2(A)	23,800	1-2-77	3.36	400
SACRAMENTO RIVER AT VINA BRIDGE	--	1945-	DWR	1-24-70 1-24-70	191.5(T) - -	171,000 228,000(L)	1-3-77	169.24	18200
SACRAMENTO RIVER AT HAMILTON CITY (BEFORE SHASTA DAM)	--	1927-43	DWR	12-11-37	150.7(CT	350,000(EL			
SACRAMENTO RIVER AT HAMILTON CITY (AFTER SHASTA DAM)	--	1944-	DWR	1-24-70	150.8(T)	156,000	1-3-77	130.82	18400
BIG CHICO CREEK NEAR CHICO	72	1930-	USGS	1- 5-65	15.4	9,580	1-3-77	2.85	250
STONY CREEK NEAR FRUTO	598	1901-12 1960-	USGS	12-23-64	15.9	40,200	4-6-77	4.34	400
SACRAMENTO RIVER AT ORD FERRY (BEFORE SHASTA DAM)	--	1921-43	DWR	2-28-40	121.7(T)	370,000(EL			
SACRAMENTO RIVER AT ORD FERRY (AFTER SHASTA DAM)	--	1944-	DWR	1-24-70	119.8(T)	265,000(EL	1-3-77	99.42	14700
SACRAMENTO RIVER AT BUTTE CITY (BEFORE SHASTA DAM)	--	1921-43	USGS-DWR	2- 7-42	96.9	170,000			

STREAM AND STATION	DRAINAGE AREA IN SQ KM	PERIOD OF RECORD	SOURCE OF RECORD	PREVIOUS MAXIMUM OF RECORD			1976-1977 WATER YEAR		
				DATE	STAGE IN METRES	DISCHARGE IN M /S	DATE	STAGE IN METRES	DISCHARGE IN M /S
CENTRAL VALLEY AREA									
SACRAMENTO RIVER BASIN									
SACRAMENTO RIVER AT DELTA	1100	1944-	USGS	12-22-64	6.1	1,100	9-19-77	2.25	65
PIT RIVER NEAR MIESEN	6410	1904-31 1951-	USGS	3-1 -07	5.1	957	5-13-77	1.26	13
PIT RIVER BELOW PIT NO.4 DAM	12035	1922-	USGS	1-25-70	5.5	920(E)	10-30-76	1.38	7.0
MCCLOUD RIVER ABOVE SHASTA LAKE	1564	1945-	USGS	12-22-55	8.6	1,280	9-29-77	3.26	21
SACRAMENTO RIVER AT KESWICK	16752	1938-	USGS-DWR	2-23-40	14.4(C)	5,270	7 -7-77	4.43	334
CLEAR CREEK AT FRENCH GULCH	297	1950-	USGS	12-22-64	4.2	215	5 -2-77	1.14	2.9
CLEAR CREEK NEAR IGO	590	1940-	USGS	12-21-55	4.2	693	9-19-77	1.04	8.4
COW CREEK NEAR MILLVILLE	1100	1949-	USGS	12-27-51	6.6	1,280	5-11-77	1.38	48
COTTONWOOD CREEK NEAR COTTONWOOD	2387	1940-	USGS	12-22-64	6.0	1,700	9-20-77	2.60	62
BATTLE CREEK BELOW COLEMAN FISH HATCHERY NEAR COTTONWOOD	927	1961-	USGS	12-11-37	4.8(AC)	991	1 -2-77	0.86	28
SACRAMENTO RIVER AT RENO BRIDGE	- -	1960-	DWR	1-24-70	14.7	4,470	6-30-77		331
PAYNES CREEK NEAR RED BLUFF	240	1949-	USGS	12- 1-61	3.4	300	1 -2-77	1.46	20
RED BANK CREEK NEAR RED BLUFF	243	1948-	DWR	1- 5-65	3.1	275	5-11-77	1.48	4.6
ANTELOPE CREEK NEAR RED BLUFF	318	1940-	USGS	1-23-70	5.5	487	1 -2-77	2.25	27
ELDER CREEK NEAR PASKENTA	240	1948-	USGS	2-24-58	4.2(C)	331	3-16-77	0.95	11
MILL CREEK NEAR LOS MOLINOS	339	1909-13 1928-	USGS	12-11-37	7.1(A)	1,030	9-29-77	0.92	12
THOMES CREEK AT PASKENTA	502	1920-	USGS-DWR	12-22-64	4.7	1,070	3-16-77	1.08	8.9
DEER CREEK NEAR VINA	538	1911-15 1920-	USGS-DWR	12-10-37	5.9(A)	673	1 -2-77	1.02	11
SACRAMENTO RIVER AT VINA BRIDGE	- -	1945-	DWR	1-24-70 1-24-70	58.4(T) - -	4,840 6,460(L)	1 -3-77	51.58	402
SACRAMENTO RIVER HAMILTON CITY (BEFORE SHASTA DAM)	- -	1927-43	DWR	12-11-37	45.9(CT)	4,840(EL)			
SACRAMENTO RIVER AT HAMILTON CITY (AFTER SHASTA DAM)	- -	1944-	DWR	1-24-70	46.0(T)	4,420	1 -3-77	39.87	407
BIG CHICO CREEK NEAR CHICO	186	1930-	USGS	1- 5-65	4.7	271	1 -3-77	0.87	7.2
STONY CREEK NEAR FRUTO	1548	1901-12 1960-	USGS	12-23-64	4.8	1,140	4 -6-77	1.32	11
SACRAMENTO RIVER AT OHO FERRY (BEFORE SHASTA DAM)	- -	1921-43	DWR	2-28-40	37.1(T)	1,140(EL)			
SACRAMENTO RIVER AT OHO FERRY (AFTER SHASTA DAM)	- -	1944-	DWR	1-24-70	36.5(T)	7,500(EL)	1 -3-77	30.30	416
SACRAMENTO RIVER AT BUTTE CITY (BEFORE SHASTA DAM)	- -	1921-43	USGS-DWR	2- 7-42	29.5	7,500			

STREAM AND STATION	DRAINAGE AREA IN SQ MILES	PERIOD OF RECORD	SOURCE OF RECORD	PREVIOUS MAXIMUM OF RECORD DATE	PREVIOUS MAXIMUM OF RECORD STAGE IN FEET	PREVIOUS MAXIMUM OF RECORD DISCHARGE IN CFS	1976-1977 WATER YEAR DATE	1976-1977 WATER YEAR STAGE IN FEET	1976-1977 WATER YEAR DISCHARGE IN CFS
CENTRAL VALLEY AREA (CONTINUED)									
SACRAMENTO RIVER BASIN (CONTINUED)									
SACRAMENTO RIVER AT BUTTE CITY (AFTER SHASTA DAM)	--	1944-	USGS-DWR	2-20-58 1-24-70	96.7 - -	160,000 225,000(L)	1 -3-77	73.33	13700
MOULTON WEIR SPILL TO BUTTE BASIN	--	1935-	DWR	1-25-70 2- 7-42	83.6 83.8	36,400(B) - -			NO FLOW
COLUSA WEIR SPILL TO BUTTE BASIN	--	1935-	DWR	3- 1-40	70.6	86,000(B)			NO FLOW
SACRAMENTO RIVER AT COLUSA	12110	1940-	USGS-DWR	2- 8-42	69.2	49,000	1 -4-77		10700
COLUSA BASIN DRAIN AT HIGHWAY 20	--	1924-	DWR	2-21-58	51.9	25,400(E)	5 -4-77	43.77	1200
BUTTE CREEK NEAR CHICO	147	1930-	USGS	12-22-64	14.1	21,200	1 -1-77	2.16	500
BUTTE SLOUGH NEAR MERIDIAN	--	1968-	DWR	1-26-70	61.5(F)	152,000(E)	1 -4-77	44.64	750
TISDALE WEIR SPILL TO SUTTER BYPASS	--	1940-	DWR	3- 1-40	53.3	25,700(B)			NO FLOW
SACRAMENTO RIVER BELOW WILKINS SLOUGH	12926	1938-	USGS	1-26-70 3- 1-40	50.7 52.8	29,300 - -	1 -4-77	33.84	10900
SACRAMENTO RIVER AT KNIGHTS LANDING	14541	1921-39 1940-	USGS-DWR	1-26-70 2- 8-42	40.9 41.8(D)	30,800 - -	1 -5-77		10600
MIDDLE FORK FEATHER RIVER NEAR CLIO	686	1925-	USGS	2- 1-63	16.2	14,500	2-21-77	5.30	450
MIDDLE FORK FEATHER RIVER NEAR MERRIMAC	1062	1951-	USGS	12-22-64	26.5(A)	86,200	2-22-77	6.99	850
NORTH FORK FEATHER RIVER NEAR PRATTVILLE	493	1905-	USGS	3-19-07	16.2(C)	10,000	3-25-77	2.64	50
BUTT CREEK BELOW ALMADOR-BUTT CREEK TUNNEL NEAR PRATTVILLE	69	1936-59 1964-	USGS	12-23-64	5.9	3,830	2-21-77	0.94	100
INDIAN CREEK NEAR CRESCENT MILLS	739	1906-18 1930-	USGS	3-19-07	20.2(C)	25,000	2-21-77	3.14	250
SPANISH CREEK ABOVE BLACKHAWK CREEK AT KEDDIE	184	1933-	USGS	12-22-64	13.5	15,400	2-21-77	2.79	250
NORTH FORK FEATHER RIVER AT PULGA	1953	1910-	USGS	12-22-64	35.8	73,000(H)			
WEST BRANCH FEATHER RIVER NEAR PARADISE	110	1957-	USGS-DWR	12-22-64	26.2(A)	26,300	9-22-77	5.22	300
FEATHER RIVER AT OROVILLE (BEFORE OROVILLE DAM)	3624	1894-67	USGS-DWR NOAA	3-19-07 12-22-64	28.2 - -	230,000(CP 252,000(Q)			
FEATHER RIVER AT OROVILLE (AFTER OROVILLE DAM)	3624	1967-	USGS-DWR	1-25-70	15.3	56,300(N)	8-10-77	0.65	450
THERMALITO AFTERBAY RELEASE TO FEATHER RIVER NEAR OROVILLE	--	1967-	USGS-DWR	1-28-70	23.3	21,600	4-28-77		3000
FEATHER RIVER NEAR GRIDLEY (BEFORE ORDVILLE DAM)	3676	1929-67	USGS-DWR	12-23-55	102.2(T)	- -			
FEATHER RIVER NEAR GRIDLEY (AFTER OROVILLE DAM)	3676	1967-	USGS-DWR	1-27-70	92.8(T)	72,900	4-28-77	76.15	3200
SOUTH HONCUT CREEK NEAR BANGOR	31	1950-	USGS	12-26-64	19.3	17,600	1 -3-77	3.23	50

PEAK FLOWS AND STAGES (CONTINUED)
METRIC UNITS

STREAM AND STATION	DRAINAGE AREA IN SQ KM	PERIOD OF RECORD	SOURCE OF RECORD	PREVIOUS MAXIMUM OF RECORD			1976-1977 WATER YEAR		
				DATE	STAGE IN METRES	DISCHARGE IN M /S	DATE	STAGE IN METRES	DISCHARGE IN M /S
CENTRAL VALLEY AREA (CONTINUED)									
SACRAMENTO RIVER BASIN (CONTINUED)									
SACRAMENTO RIVER AT BUTTE CITY (AFTER SHASTA DAM)	- -	1944-	USGS-DWR	2-20-58 1-24-70	29.5 - -	4,530 6,730(L)	1 -3-77	22.35	387
MOULTON WEIR SPILL TO BUTTE BASIN	- -	1935-	DWR	1-25-70 2- 7-42	25.5 25.5	1,030(B) - -			NO FLOW
COLUSA WEIR SPILL TO BUTTE BASIN	- -	1935-	DWR	3- 1-40	21.5	2,440(R)			NO FLOW
SACRAMENTO RIVER AT COLUSA	31365	1940-	USGS-DWR	2- 8-42	21.1	1,390	1 -4-77		302
COLUSA BASIN DRAIN AT HIGHWAY 20	- -	1924-	DWR	2-21-58	15.8	719(E)	5 -4-77	13.38	34
BUTTE CREEK NEAR CHICO	380	1930-	USGS	12-22-64	4.3	600	1 -1-77	0.66	14
BUTTE SLOUGH NEAR MERIDIAN	- -	1968-	DWR	1-26-70	18.7(F)	4,300(E)	1 -4-77	13.61	20
TISDALE WEIR SPILL TO SUTTER BYPASS	- -	1940-	DWR	3- 1-40	16.2	727(R)			NO FLOW
SACRAMENTO RIVER BELOW WILKINS SLOUGH	33478	1938-	USGS	1-26-70 3- 1-40	15.5 16.1	829 - -	1 -4-77	10.31	308
SACRAMENTO RIVER AT KNIGHTS LANDING	37661	1921-39 1940-	USGS-DWR	1-26-70 2- 8-42	12.5 12.7(D)	872 - -	1 -5-77		300
MIDDLE FORK FEATHER RIVER NEAR CLIO	1776	1925-	USGS	2- 1-63	4.9	410	2-21-77	1.62	12
MIDDLE FORK FEATHER RIVER NEAR MERRIMAC	2750	1951-	USGS	12-22-64	8.1(A)	2,440	2-22-77	2.13	24
NORTH FORK FEATHER RIVER NEAR PRATTVILLE	1276	1905-	USGS	3-19-07	4.9(C)	283	3-25-77	0.80	1.3
BUTT CREEK BELOW ALMADOR-BUTT CREEK TUNNEL NEAR PRATTVILLE	178	1936-59 1964-	USGS	12-23-64	1.8	108	2-21-77	0.29	2.7
INDIAN CREEK NEAR CRESCENT MILLS	1914	1906-18 1930-	USGS	3-19-07	6.2(C)	707	2-21-77	0.96	7.3
SPANISH CREEK ABOVE BLACKHAWK CREEK AT KEDDIE	476	1933-	USGS	12-22-64	4.1	436	2-21-77	0.85	7.1
NORTH FORK FEATHER RIVER AT PULGA	5058	1910-	USGS	12-22-64	10.9	2,070(H)			
WEST BRANCH FEATHER RIVER NEAR PARADISE	285	1957-	USGS-DWR	12-22-64	8.0(A)	744	9-22-77	1.59	8.2
FEATHER RIVER AT OROVILLE (BEFORE OROVILLE DAM)		1894-67	USGS-DWR NOAA	3-19-07 12-22-64	8.6 - -	6,510(CP) 7,140(O)			
FEATHER RIVER AT OROVILLE (AFTER OROVILLE DAM)	9386	1967-	USGS-DWR	1-25-70	4.7	1,590(N)	8-10-77	0.20	12
THERMALITO AFTERBAY RELEASE TO FEATHER RIVER NEAR OROVILLE	- -	1967-	USGS-DWR	1-28-70	7.1	611	4-28-77		84
FEATHER RIVER NEAR GRIDLEY (BEFORE OROVILLE DAM)	9521	1929-67	USGS-DWR	12-23-55	31.2(T)	- -			
FEATHER RIVER NEAR GRIDLEY (AFTER OROVILLE DAM)	9520	1967-	USGS-DWR	1-27-70	28.3(T)	2,060	4-28-77	23.21	90
SOUTH HONCUT CREEK NEAR RANCOR	80	1950-	USGS	12-26-64	5.9	498	1 -3-77	0.98	1.5

STREAM AND STATION	DRAINAGE AREA IN SQ MILES	PERIOD OF RECORD	SOURCE OF RECORD	PREVIOUS MAXIMUM OF RECORD DATE	PREVIOUS MAXIMUM OF RECORD STAGE IN FEET	PREVIOUS MAXIMUM OF RECORD DISCHARGE IN CFS	1976-1977 WATER YEAR DATE	1976-1977 WATER YEAR STAGE IN FEET	1976-1977 WATER YEAR DISCHARGE IN CFS
CENTRAL VALLEY AREA (CONTINUED)									
SACRAMENTO RIVER BASIN (CONTINUED)									
FEATHER RIVER AT YUBA CITY	3974	1903-	USGS-DWR	12-23-64 12-24-55	76.4 82.4	172,000 - -	5 -1-77	40.18	(D)
NORTH YUBA RIVER BELOW GOODYEARS BAR	250	1930-	USGS	2- 1-63	23.8(A)	80,000	2-21-77	4.04	600
NORTH YUBA RIVER BELOW NEW MILLARDS BAR DAM NEAR SAN JUAN	490	1900-	USGS	1-22-70 12-22-64	35.3 40.5(C)	56,200 91,600(M)	1 -27-70	5.70	20
SOUTH YUBA RIVER NEAR CISCO	52	1902-	USGS	1-31-63	20.6(A)	18,000	5-26-77	4.49	500
SOUTH YUBA RIVER AT JONES BAR NEAR GRASS VALLEY	308	1900-08 1959-	USGS	12-22-64	25.0(A)	53,600	2-21-77	5.86	550
YUBA RIVER BELOW ENGLEBRIGHT DAM	1108	1941-	USGS	12-22-64	564.1(C)	171,000(K)	12 -3-76	8.91	950
DEER CREEK NEAR SMARTVILLE	85	1935-	USGS	10-13-62	13.8	11,600	1 -3-77	4.33	850
YUBA RIVER NEAR MARYSVILLE	1339	1900-	USGS	12-22-64	90.2	180,000	10 -5-76	60.48	650
BEAR RIVER NEAR WHEATLAND	292	1928-	USGS	12-22-55 11-21-50	19.3(C) 20.8(C)	33,000 - -	10 -1-76	5.50	200
FEATHER RIVER AT NICOLAUS	5920	1903-	USGS-DWR	12-23-55	51.6	357,000	10 -1-76	21.81	3600
FREMONT WEIR (WEST END) SPILL TO YOLO BYPASS	--	1930-	DWR	12-23-55	39.7	299,000(B)			NO FLOW
SACRAMENTO RIVER AT VERONA	21257	1929-	USGS-DWR	3- 1-40	41.2	79,200	1 -5-77	14.52	14200
SACRAMENTO WEIR SPILL TO YOLO BYPASS NEAR SACRAMENTO	--	1926-	USGS-DWR	3-26-28 12-23-55	32.8 33.0	118,000(BE - -			NO FLOW
NORTH FORK AMERICAN RIVER AT NORTH FORK DAM	342	1941-	USGS	12-23-64	11.9	65,400	5-27-77	1.09	550
RUBICON RIVER NEAR FORESTHILL	315	1958-	USGS	12-23-64	55.8(AI)	- -	2-21-77	7.60	150
MIDDLE FORK AMERICAN RIVER NEAR FORESTHILL	524	1958-	USGS	12-23-64	69.0(AI)	310,000(I)	3-11-77	7.27	1150
MIDDLE FORK AMERICAN RIVER NEAR AUBURN	614	1911-	USGS	12-23-64	60.8(AI)	253,000(I)	7-30-77	7.28	1050
SOUTH FORK AMERICAN RIVER NEAR CAMINO	493	1922-	USGS	12-23-55	32.6(A)	49,800	9-13-77	5.49	30
SOUTH FORK AMERICAN RIVER NEAR LOTUS	673	1951-	USGS	12-23-55	21.4	71,800	9 -7-77	6.67	1750
AMERICAN RIVER AT FAIR OAKS (BEFORE FOLSOM DAM)	1888	1904-55	USGS	11-21-50	31.9(C)	180,000			
AMERICAN RIVER AT FAIR OAKS (AFTER FOLSOM DAM)	1888	1955-	USGS	12-23-64	21.6	115,000	12 -6-76	6.56	1900
SACRAMENTO RIVER AT SACRAMENTO	23530	1879-	USGS-DWR NOAA	11-21-50	30.1(C)	104,000	1 -5-77		13700
SACRAMENTO RIVER AT WALNUT GROVE	--	1929-	DWR	12-25-64	12.2	- -	6-30-77	4.45	(D)
ADOBE CREEK NEAR KELSEYVILLE	6	1954-	USGS	12-22-64	9.1	1,500	1 -2-77	0.91	30
KELSEY CREEK NEAR KELSEYVILLE	37	1906-	USGS	12-21-55	12.8	8,800	1 -2-77	4.28	100
CACHE CREEK NEAR LOWER LAKE	528	1948-	USGS	2-24-58	9.4	8,000	12-24-76	0.74	10

PEAK FLOWS AND STAGES (CONTINUED)
METRIC UNITS

STREAM AND STATION	DRAINAGE AREA IN SQ KM	PERIOD OF RECORD	SOURCE OF RECORD	PREVIOUS MAXIMUM OF RECORD			1976-1977 WATER YEAR		
				DATE	STAGE IN METRES	DISCHARGE IN M /S	DATE	STAGE IN METRES	DISCHARGE IN M /S
CENTRAL VALLEY AREA (CONTINUED)									
SACRAMENTO RIVER BASIN (CONTINUED)									
FEATHER RIVER AT YUBA CITY	10292	1943-	USGS-DWR	12-23-64 12-20-55	23.3 25.1	4,870 - -	5 -1-77	12.25	(D)
NORTH YUBA RIVER BELOW GOODYEARS BAR	447	1930-	USGS	2- 1-63	7.3(A)	1,130	2-21-77	1.23	17
NORTH YUBA RIVER BELOW NEW MILLARDS BAR DAM NEAR SAN JUAN	1269	1960-	USGS	1-22-70 12-22-64	10.8 12.3(C)	1,590 2,590(M)	1 -27 70	1.70	0.8
SOUTH YUBA RIVER NEAR CISCO	130	1942-	USGS	1-31-63	6.3(A)	521	5-26-77	1.37	14
SOUTH YUBA RIVER AT JONES BAR NEAR GRASS VALLEY	797	1940-48 1959-	USGS	12-22-64	7.6(A)	1,520	2-21-77	1.79	14
YUBA RIVER BELOW ENGLEBRIGHT DAM	2869	1941-	USGS	12-22-64	171.9(C)	4,840(K)	12 -3-76	1.50	26
DEER CREEK NEAR SMARTVILLE	220	1935-	USGS	10-13-62	4.2	328	1 -3-77	1.32	12
YUBA RIVER NEAR MARYSVILLE	3067	1940-	USGS	12-22-64	27.5	5,100	10 -5-76	18.42	19
BEAR RIVER NEAR WHEATLAND	754	1928-	USGS	12-22-55 11-21-50	5.9(C) 6.3(C)	934 - -	10 -1-76	1.68	5.0
FEATHER RIVER AT NICOLAUS	15333	1943-	USGS-DWR	12-23-55	15.7	10,100	10 -1-76	6.65	101
FREMONT WEIR (WEST END) SPILL TO YOLO BYPASS	- -	1934-	DWR	12-23-55	12.1	8,330(B)			NO FLOW
SACRAMENTO RIVER AT VERONA	55055	1929-	USGS-DWR	3- 1-40	12.6	2,240	1 -5-77	4.43	402
SACRAMENTO WEIR SPILL TO YOLO BYPASS NEAR SACRAMENTO	- -	1926-	USGS-DWR	3-26-28 12-23-55	10.0 10.1	3,340(BE) - -			NO FLOW
NORTH FORK AMERICAN RIVER AT NORTH FORK DAM	885	1941-	USGS	12-23-64	3.6	1,850	5-27-77	0.33	16
RUBICON RIVER NEAR FORESTHILL	815	1958-	USGS	12-23-64	16.9(AI)	- -	2-21-77	2.32	4.6
MIDDLE FORK AMERICAN RIVER NEAR FORESTHILL	1357	1958-	USGS	12-23-64	21.0(AI)	8,780(I)	3-11-77	2.22	32
MIDDLE FORK AMERICAN RIVER NEAR AUBURN	1590	1911-	USGS	12-23-64	18.4(AI)	7,160(I)	7-30-77	2.22	29
SOUTH FORK AMERICAN RIVER NEAR CAMINO	1276	1922-	USGS	12-23-55	9.9(A)	1,410	9-13-77	1.67	0.8
SOUTH FORK AMERICAN RIVER NEAR LOTUS	1743	1951-	USGS	12-23-55	6.5	2,030	9 -7-77	2.03	49
AMERICAN RIVER AT FAIR OAKS (BEFORE FOLSOM DAM)		1904-55	USGS	11-21-50	9.7(C)	2,030			
AMERICAN RIVER AT FAIR OAKS (AFTER FOLSOM DAM)	4889	1955-	USGS	12-23-64	6.6	3,260	12 -6-76	2.00	54
SACRAMENTO RIVER AT SACRAMENTO	60942	1879-	USGS-DWR NOAA	11-21-50	9.2(C)	2,940	1 -5-77		387
SACRAMENTO RIVER AT WALNUT GROVE	- -	1929-	DWR	12-25-64	3.7	- -	6-30-77	1.36	(D)
ADOBE CREEK NEAR KELSEYVILLE	15	1954-	USGS	12-22-64	2.8	42	1 -2-77	0.28	0.9
KELSEY CREEK NEAR KELSEYVILLE	95	1946-	USGS	12-21-55	3.9	249	1 -2-77	1.30	2.9
CACHE CREEK NEAR LOWER LAKE	1367	1944-	USGS	2-24-58	2.9	226	12-24-76	0.23	0.3

STREAM AND STATION	DRAINAGE AREA IN SQ MILES	PERIOD OF RECORD	SOURCE OF RECORD	PREVIOUS MAXIMUM OF RECORD			1976-1977 WATER YEAR		
				DATE	STAGE IN FEET	DISCHARGE IN CFS	DATE	STAGE IN FEET	DISCHARGE IN CFS
CENTRAL VALLEY AREA (CONTINUED)									
SACRAMENTO RIVER BASIN (CONTINUED)									
NORTH FORK CACHE CREEK NEAR LOWER LAKE	197	1930-	USGS	12-11-37	14.0(A)	20,300	1 -2-77	2.51	100
CACHE CREEK AT RUMSEY	955	1960-	USGS-DWR	1- 5-65	21.4(AC)	59,000	1 -3-77	9.50	100
CACHE CREEK NEAR CAPAY	1044	1942-	USGS	2-24-58	20.9	51,600	STATION DISCONTINUED		
CACHE CREEK AT YOLO	1139	1903-	USGS	2-25-58 3-10-04	25.4 28.4(P)	41,400 - -			NO FLOW
YOLO BYPASS NEAR WOODLAND	--	1939-	USGS-DWR	2- 8-42	32.0	272,000	11-24-76		40
PUTAH CREEK NEAR WINTERS	574	1930-	USGS-DWR	2-27-40	30.5	81,000	4-25-77	8.30	800
YOLO BYPASS NEAR LISBON	--	1914-	DWR	12-25-64	24.7	350,000(E)	1 -2-77	7.49	(D)
SACRAMENTO RIVER AT RIO VISTA	--	1906-	DWR	12-26-55	10.2	- -(D)			
SAN JOAQUIN RIVER BASIN									
WILLOW CREEK AT MOUTH NEAR AUBERRY	130	1952-	USGS	12-23-55	28.5(A)	15,700	6 -9770	5.73	50
SAN JOAQUIN RIVER BELOW KERCHOFF POWERHOUSE NEAR PRATHER	1481	1942-	USGS-	12-23-55	51.0(A)	92,200	7-28-77	12.55	1800
SAN JOAQUIN RIVER BELOW FRIANT	1676	1907-	USGS	12-11-37 6- 6-69	23.8(CM) 11.7	77,200(M) 12,400	8 -8-77	2.88	250
SAN JOAQUIN RIVER NEAR MENDOTA	4310	1939-	USBR-DWR	6- 1-52 6-20-41	- - 13.8(C)	8,840 11,740(M)	6-28-77	4.44	550
FRESNO RIVER NEAR KNOWLES	133	1911-13 1915-	USGS	12-23-55	11.5	13,300	6-10-77	1.73	100
FRESNO RIVER NEAR DAULTON	258	1941-	USGS	12-23-55	12.6	17,500	7-14-77	4.61	150
CHOWCHILLA RIVER BELOW RAYNOR CREEK NEAR RAYMOND	254	1972-	USGS	2-11-73	9.9	11,100	4-14-77	2.65	60
EASTSIDE BYPASS NEAR EL NIDO	--	1964-	DWR	2-25-69	17.6	21,700			NO FLOW
SAN JOAQUIN RIVER AT FREMONT FORD BRIDGE	7615	1937-	DWR	2-26-69	68.1	9,180	STATION DISCONTINUED		
MERCED RIVER AT POHONO BRIDGE NEAR YOSEMITE	321	1916-	USGS	12-23-55	21.5(A)	23,400	6 -9-77	6.58	2400
MERCED RIVER NEAR STEVINSON	1273	1940-	USGS	12- 5-50	73.8	13,600	10 -1-76	56.80	200
SAN JOAQUIN RIVER NEAR NEWMAN	9520	1912-	USGS-DWR	2-26-69	65.9(A)	34,700(L)	10 -2-76	49.71	750
ORESTIMBA CREEK NEAR NEWMAN	134	1932-	USGS	4- 2-58	6.6(C)	10,200			NO FLOW
SOUTH FORK TUOLUMNE RIVER NEAR OAKLAND RECREATION CAMP	87	1923-	USGS	12-23-55	10.9(A)	11,900	6 -9-77	3.22	200
MIDDLE TUOLUMNE RIVER AT OAKLAND RECREATION CAMP	74	1916-	USGS	12-23-55	11.8(A)	4,920	6 -9-77	3.01	150
TUOLUMNE RIVER AT MODESTO	1884	1940-	USGS-DWR	12- 9-50	69.2	57,000	3-16-77	41.16	450

PEAK FLOWS AND STAGES (CONTINUED)
METRIC UNITS

STREAM AND STATION	DRAINAGE AREA IN SQ KM	PERIOD OF RECORD	SOURCE OF RECORD	PREVIOUS MAXIMUM OF RECORD			1976-1977 WATER YEAR		
				DATE	STAGE IN METRES	DISCHARGE IN M /S	DATE	STAGE IN METRES	DISCHARGE IN M /S
CENTRAL VALLEY AREA (CONTINUED)									
SACRAMENTO RIVER BASIN (CONTINUED)									
NORTH FORK CACHE CREEK NEAR LOWER LAKE	510	1930-	USGS	12-11-37	4.3(A)	574	1 -2-77	0.77	3.4
CACHE CREEK AT RUMSEY	2473	1960-	USGS-DWR	1- 5-65	6.5(AC)	1,670	1 -3-77	2.90	2.8
CACHE CREEK NEAR CAPAY	2703	1942-	USGS	2-24-58	6.4	1,460	STATION DISCONTINUED		
CACHE CREEK AT YOLO	2949	1903-	USGS	2-25-58 3-10-04	26.0 26.9(B)	1,170 - -			NO FLOW
YOLO BYPASS NEAR WOODLAND	- -	1939-	USGS-DWR	2- 8-42	9.8	7,700	11-24-76		1.2
PUTAH CREEK NEAR WINTERS	1486	1930-	USGS-DWR	2-27-40	9.3	2,290	4-25-77	2.53	22
YOLO BYPASS NEAR LISBON	- -	1914-	DWR	12-25-64	7.5	9,910(E)	1 -2-77	2.28	(D)
SACRAMENTO RIVER AT RIO VISTA	- -	1906-	DWR	12-26-55	3.1	- -(D)			
SAN JOAQUIN RIVER BASIN									
WILLOW CREEK AT MOUTH NEAR AUBERRY	337	1952-	USGS	12-23-55	8.7(A)	444	6 -9770	1.75	1.5
SAN JOAQUIN RIVER BELOW KERCHOFF POWERHOUSE NEAR PRATHER	3835	1942-	USGS	12-23-55	15.5(A)	2,610	7-28-77	3.83	50
SAN JOAQUIN RIVER BELOW FRIANT	4340	1907-	USGS	12-11-37 6- 6-69	7.3(CM) 3.6	2,190(M) 351	8 -8-77	0.88	6.6
SAN JOAQUIN RIVER NEAR MENDOTA	11163	1939-	USBR-DWR	6- 1-52 6-20-41	- - 4.2(C)	250 332(M)	6-28-77	1.35	15
FRESNO RIVER NEAR KNOWLES	340	1911-13 1915-	USGS	12-23-55	3.5	376	6-10-77	0.53	2.9
FRESNO RIVER NEAR OAULTON	668	1941-	USGS	12-23-55	3.8	495	7-14-77	1.41	3.5
CHOWCHILLA RIVER BELOW RAYNOR CREEK NEAR RAYMOND	657	1972-	USGS	2-11-73	3.0	314	4-14-77	0.81	1.8
EASTSIDE BYPASS NEAR EL NIDO	- -	1964-	DWR	2-25-69	5.4	614			NO FLOW
SAN JOAQUIN RIVER AT FREMONT FORD BRIDGE	19722	1937-	DWR	2-26-69	20.8	259			
MERCED RIVER AT POHONO BRIDGE NEAR YOSEMITE	831	1916-	USGS	12-23-55	6.6(A)	662	6 -9-77	2.01	67
MERCED RIVER NEAR STEVINSON	3297	1940-	USGS	12- 5-50	22.5	385	10 -1-76	17.31	6.3
SAN JOAQUIN RIVER NEAR NEWMAN	24657	1912-	USGS-DWR	2-26-69	20.1(A)	982(L)	10 -2-76	15.15	21
ORESTIMBA CREEK NEAR NEWMAN	347	1932-	USGS	4- 2-58	2.0(C)	288			NO FLOW
SOUTH FORK TUOLUMNE RIVER NEAR OAKLAND RECREATION CAMP	225	1923-	USGS	12-23-55	3.3(A)	336	6 -9-77	0.98	5.7
MIDDLE TUOLUMNE RIVER AT OAKLAND RECREATION CAMP	191	1916-	USGS	12-23-55	3.6(A)	139	6 -9-77	0.92	4.3
TUOLUMNE RIVER AT MODESTO	4879	1940-	USGS-DWR	12- 9-50	21.1	1,610	3-16-77	12.55	12

STREAM AND STATION	DRAINAGE AREA IN SQ MILES	PERIOD OF RECORD	SOURCE OF RECORD	PREVIOUS MAXIMUM OF RECORD DATE	PREVIOUS MAXIMUM OF RECORD STAGE IN FEET	PREVIOUS MAXIMUM OF RECORD DISCHARGE IN CFS	1976-1977 WATER YEAR DATE	1976-1977 WATER YEAR STAGE IN FEET	1976-1977 WATER YEAR DISCHARGE IN CFS
CENTRAL VALLEY AREA (CONTINUED)									
SAN JOAQUIN RIVER BASIN (CONTINUED)									
SOUTH FORK STANISLAUS RIVER NEAR LONG BARN	67	1937-	USGS	11-21-50	9.3	4,900	11-11-76	1.07	7
STANISLAUS RIVER AT ORANGE BLOSSOM BRIDGE	--	1928-39 1940-	DWR	12-23-55	31.8	62,000	6-15-77	1.68	60
STANISLAUS RIVER AT RIPON	1075	1940-	USGS-DWR	12-24-55 2-12-38	63.3 64.4(A)	62,500 - -	10 -4-76	36.04	100
SAN JOAQUIN RIVER NEAR VERNALIS	13540	1922-	USGS-DWR	12- 9-50 1-27-69	32.8(C) 30.6	79,000 52,600	10 -2-76	11.32	1950
DUCK CREEK NEAR STOCKTON	--	1950-	DWR	1-16-73	6.5	780	8-27-77	2.75	30
SOUTH FORK CALAVERAS RIVER NEAR SAN ANDREAS	118	1950-	USGS	12-23-55	10.3	17,600	1 -3-77	1.45	30
MORMON SLOUGH AT HELLOTA	--	1948-	DWR	4- 2-58	20.7	15,400(E)			N/A
STOCKTON DIVERTING CANAL AT STOCKTON	--	1944-	DWR	4- 4-58	17.1(E)	11,400(E)	5 -2-77	5.17	150
CALAVERAS RIVER NEAR STOCKTON	--	1958-	DWR	1- 6-65	12.6	760(E)	5 -1-77	4.40	60
BEAR CREEK NEAR LOCKEFORD	48	1930-	USGS	4- 3-58	15.1	2,930	3-16-77	3.64	3
COLE CREEK NEAR SALT SPRINGS DAM	20	1927-42 1943-	USGS	12-23-64	10.2	6,140	5-20-77	2.69	250
SOUTH FORK MOKELUMNE RIVER NEAR WEST POINT	75	1933-	USGS	12-23-55	14.8(AC)	6,920	2-21-77	3.10	70
MOKELUMNE RIVER NEAR MOKELUMNE HILL	544	1901-	USGS	12- 3-50	18.5	33,700	1 -4-77	4.00	1050
MOKELUMNE RIVER AT WOODBRIDGE	661	1924-	USGS	11-22-50	29.6	27,000	11 -1-76	9.09	900
MOKELUMNE RIVER NR THORNTON(HENSON FERRY)	2045	1911-	DWR-NOAA	12-24-55	18.0(C)	- -(D)	6-29-77	3.86	(D)
DRY CREEK NEAR GALT	329	1926-33 1944-	USGS-DWR	4- 3-58	15.3	24,000			NO FLOW
NORTH FORK COSUMNES RIVER NEAR EL DORADO	205	1911-41 1948-	USGS	12-23-55	14.8	15,800	2-22-77	2.68	100
SOUTH FORK COSUMNES RIVER NEAR RIVER PINES	64	1957-	USGS	2- 1-63	10.9	5,540	1 -3-77	1.10	20
COSUMNES RIVER AT MICHIGAN BAR	536	1907-	USGS-DWR	12-23-55 3- -07	14.6 16.3(A)	42,000 - -	2-22-77	3.24	200
COSUMNES RIVER AT MCCONNELL	724	1941-	USGS	12-23-55	46.3	54,000	2-23-77	32.00	1950
TULARE LAKE BASIN									
TULE RIVER NEAR SPRINGVILLE	247	1957-	USGS	12- 6-66	19.7(AC)	49,600	1 -3-77	4.16	80
TULE RIVER BELOW SUCCESS DAM	393	1953-	USGS	12-23-55 11-19-50	21.7(C) 26.0(AC)	27,000 32,000(M)	7-18-77	4.61	150
KAWEAH RIVER AT THREE RIVERS	418	1958-	USGS	12- 5-66 12- 5-66	16.7 19.0(A)	73,000 - -	6 -9-77	5.81	1250
KINGS RIVER BELOW NORTH FORK	1342	1951-	USGS	12-23-55	23.1	85,200	6 -9-77	7.42	4750
BUENA VISTA LAKE BASIN									
KERN RIVER AT KERNVILLE	1009	1905-12 1953-	USGS	12- 6-66	19.3(A)	74,000	6 -2-77	5.88	950

PEAK FLOWS AND STAGES (CONTINUED)
METRIC UNITS

STREAM AND STATION	DRAINAGE AREA IN SQ KM	PERIOD OF RECORD	SOURCE OF RECORD	PREVIOUS MAXIMUM OF RECORD			1976-1977 WATER YEAR		
				DATE	STAGE IN METRES	DISCHARGE IN M /S	DATE	STAGE IN METRES	DISCHARGE IN M /S
CENTRAL VALLEY AREA (CONTINUED)									
SAN JOAQUIN RIVER BASIN (CONTINUED)									
SOUTH FORK STANISLAUS RIVER NEAR LIME BARN	173	1937-	USGS	11-21-50	2.8	138	11-11-76	0.33	0.2
STANISLAUS RIVER AT ORANGE BLOSSOM BRIDGE	- -	1928-39 1940-	DWR	12-23-55	9.7	1,760	6-19-77	0.51	1.6
STANISLAUS RIVER AT RIPON	2784	1940-	USGS-DWR	12-24-55 2-12-38	19.3 19.6(A)	1,770 - -	10 -4-76	10.98	3.0
SAN JOAQUIN RIVER NEAR VERNALIS	35068	1922-	USGS-DWR	12- 9-50 1-27-69	10.0(C) 10.5	2,240 1,490	10 -2-76	3.45	55
DUCK CREEK NEAR STOCKTON	- -	1950-	DWR	1-16-73	2.0	22	8-27-77	0.84	0.7
SOUTH FORK CALAVERAS RIVER NEAR SAN ANDREAS	305	1950-	USGS	12-23-55	3.1	498	1 -3-77	0.44	0.7
MORMON SLOUGH AT BELLOTA	- -	1948-	DWR	4- 2-58	6.3	836(E)			N/A
STOCKTON DIVERTING CANAL AT STOCKTON	- -	1944-	DWR	4- 4-58	5.2(E)	322(E)	5 -2-77	1.58	4.3
CALAVERAS RIVER NEAR STOCKTON	- -	1958-	DWR	1- 6-65	3.8	21(E)	5 -1-77	1.34	1.8
BEAR CREEK NEAR LOCKEFORD	124	1930-	USGS	4- 3-58	4.6	82	3-16-77	1.11	0.1
COLE CREEK NEAR SALT SPRINGS DAM	52	1927-42 1943-	USGS	12-23-64	3.1	173	5-20-77	0.82	7.7
SOUTH FORK MOKELUMNE RIVER NEAR WEST POINT	194	1933-	USGS	12-23-55	4.5(AC)	195	2-21-77	0.94	2.0
MOKELUMNE RIVER NEAR MOKELUMNE HILL	1408	1901-	USGS	12- 3-50	5.6	954	1 -4-77	1.22	29
MOKELUMNE RIVER AT WOODBRIDGE	1711	1924-	USGS	11-22-50	9.0	764	11 -1-76	2.77	24
MOKELUMNE RIVER NR THORNTON(HERSON FERRY)	5296	1911-	DWR-NOAA	12-24-55	5.5(C)	- -(D)	6-29-77	1.18	(D)
DRY CREEK NEAR GALT	852	1926-33 1944-	USGS-DWR	4- 3-58	4.7	679			NO FLOW
NORTH FORK COSUMNES RIVER NEAR EL DORADO	530	1911-41 1948-	USGS	12-23-55	4.5	447	2-22-77	0.82	2.7
SOUTH FORK COSUMNES RIVER NEAR RIVER PINES	165	1957-	USGS	2- 1-63	3.3	156	1 -3-77	0.34	0.6
COSUMNES RIVER AT MICHIGAN BAR	1388	1907-	USGS-DWR	12-23-55 3- -07	4.5 5.0(A)	1,190 - -	2-22-77	0.99	5.7
COSUMNES RIVER AT MCCONNELL	1875	1941-	USGS	12-23-55	14.1	1,530	2-23-77	9.75	55
TULARE LAKE BASIN									
TULE RIVER NEAR SPRINGVILLE	639	1957-	USGS	12- 6-66	6.0(AC)	1,400	1 -3-77	1.27	2.4
TULE RIVER BELOW SUCCESS DAM	1017	1953-	USGS	12-23-55 11-19-50	6.6(C) 7.9(AC)	764 906(M)	7-18-77	1.41	4.5
KAWEAH RIVER AT THREE RIVERS	1082	1958-	USGS	12- 5-66 12- 5-66	5.1 5.8(A)	2,070 - -	6 -9-77	1.77	35
KINGS RIVER BELOW NORTH FORK	3475	1951-	USGS	12-23-55	7.0	2,410	6 -9-77	2.26	134
BUENA VISTA LAKE BASIN									
KERN RIVER AT KERNVILLE	2612	1905-12 1953-	USGS	12- 6-66	5.9(A)	2,100	6 -2-77	1.79	27

STREAM AND STATION	DRAINAGE AREA IN SQ MILES	PERIOD OF RECORD	SOURCE OF RECORD	PREVIOUS MAXIMUM OF RECORD			1976-1977 WATER YEAR		
				DATE	STAGE IN FEET	DISCHARGE IN CFS	DATE	STAGE IN FEET	DISCHARGE IN CFS
NORTHERN LAHONTAN AREA									
HONEY LAKE BASIN									
WILLOW CREEK NEAR SUSANVILLE	90	1950-	USGS	2- 1-63	5.6	820	1 -3-77	2.75	50
SUSAN RIVER AT SUSANVILLE	184	1917-21 1950-	USGS	12-22-64	7.3	5,100	2-21-77	1.81	40
PYRAMID AND WINNEMUCCA LAKES BASIN									
LITTLE TRUCKEE RIVER ABOVE BOCA RESERVOIR NEAR BOCA	146	1903-10 1939-	USGS	2- 1-63	9.0	13,300	8-19-77	1.31	150
TRUCKEE RIVER AT FARAD	932	1899-	USGS	11-21-50	14.5(A)	17,500	10 -7-76	3.36	750
CARSON RIVER BASIN									
EAST FORK CARSON RIVER BELOW MARKLEEVILLE CREEK	276	1960-	USGS	1-31-63	10.2	15,100	6 -9-77	3.69	600
WEST FORK CARSON RIVER AT WOODFORDS	66	1900-07 1938-	USGS	2- 1-63	9.0	4,890	6-10-77	2.56	300
WALKER LAKE BASIN									
WEST WALKER RIVER BELOW LITTLE WALKER RIVER NEAR COLEVILLE	180	1938-	USGS	11-20-50	8.1	6,220	6 -1-77	2.97	550
EAST WALKER RIVER NEAR BRIDGEPORT	359	1911-14 1921-	USGS	6-19-63	4.6	1,390	7-25-77	2.02	300
SOUTHERN LAHONTAN AREA									
MOJAVE RIVER BASIN									
MOJAVE RIVER AT LOWER NARROWS NEAR VICTORVILLE	514	1899-06 1930-	USGS	3- 2-38	23.7	70,600	10-22-76	4.32	950
MOJAVE RIVER AT BARSTOW	1290	1930-	USGS	3- 3-38	8.6	64,300	8-17-77		10(E)
MOJAVE RIVER AT AFTON	2120	1929-32 1952-	USGS	1-26-69	10.4	18,000	9-10-77	6.64	N/A

PEAK FLOWS AND STAGES (CONTINUED)
METRIC UNITS

STREAM AND STATION	DRAINAGE AREA IN SQ KM	PERIOD OF RECORD	SOURCE OF RECORD	PREVIOUS MAXIMUM OF RECORD			1976-1977 WATER YEAR		
				DATE	STAGE IN METRES	DISCHARGE IN M /S	DATE	STAGE IN METRES	DISCHARGE IN M /S
NORTHERN LAHONTAN AREA									
HONEY LAKE BASIN									
WILLOW CREEK NEAR SUSANVILLE	233	1950-	USGS	2- 1-63	1.7	23	1 -3-77	0.84	1.4
SUSAN RIVER AT SUSANVILLE	476	1917-21 1950-	USGS	12-22-64	2.2	144	2-21-77	0.55	1.0
PYRAMID AND WINNEMUCCA LAKES BASIN									
LITTLE TRUCKEE RIVER ABOVE BOCA RESERVOIR NEAR BOCA	378	1903-10 1939-	USGS	2- 1-63	2.7	376	8-19-77	0.40	4.6
TRUCKEE RIVER AT FARAD	2413	1899-	USGS	11-21-50	4.4(A)	495	10 -7-76	1.02	21
CARSON RIVER BASIN									
EAST FORK CARSON RIVER BELOW MARKLEEVILLE CREEK	714	1960-	USGS	1-31-63	3.1	427	6 -9-77	1.12	16
WEST FORK CARSON RIVER AT WOODFORDS	170	1900-07 1938-	USGS	2- 1-63	2.7	138	6-10-77	0.78	9.0
WALKER LAKE BASIN									
WEST WALKER RIVER BELOW LITTLE WALKER RIVER NEAR COLEVILLE	466	1938-	USGS	11-20-50	2.5	176	6 -1-77	0.91	16
EAST WALKER RIVER NEAR BRIDGEPORT	929	1911-14 1921-	USGS	6-19-63	1.4	39	7-25-77	0.62	8.0
SOUTHERN LAHONTAN AREA									
MOJAVE RIVER BASIN									
MOJAVE RIVER AT LOWER NARROWS NEAR VICTORVILLE	1331	1899-06 1930-	USGS	3- 2-38	7.2	2,000	10-22-76	1.32	27
MOJAVE RIVER AT BARSTOW	3341	1930-	USGS	3- 3-38	2.6	1,820	8-17-77		0.4(E)
MOJAVE RIVER AT AFTON	5491	1929-32 1952-	USGS	1-26-69	3.2	509	9-10-77	2.02	N/A

LEGEND

USGS	United States Geological Survey
USBR	United States Bureau of Reclamation
NOAA	National Weather Service (National Oceanic and Atmospheric Administration)
USCE	United States Corps of Engineers
DWR	Department of Water Resources
PG&E	Pacific Gas and Electric Company
A	From flood marks
B	Discharge over weir or spillway
C	Site or datum then is use
D	Discharge not determined, affected by backwater or tide
E	Estimated
F	From DWR telemetering log
G	Preliminary
H	Includes flow through power plant
I	Due to failure of partially completed dam
J	Gage height revised
K	Flow through power plant not included
L	Discharge at latitude of gaging station site
M	Prior to construction of upstream dam
N	Includes flow through fish hatchery but not upstream diversion to Thermalito Afterbay
P	Observed
Q	Estimated peak inflow to partially completed Oroville Reservoir
R	Regulated stage and flow
S	Revised to current datum
T	Datum of gage is 0=0 USED
U	Crest stage partial recorder
N/A	Not available at report time
*	Peak of record established current year

METRIC EQUIVALENTS

1 square mile	= 2.59 square kilometres (km^2)
1 cubic foot per second (cfs)	= 0.028 cubic metre per second (m^3/s)
1 foot	= 0.305 metre